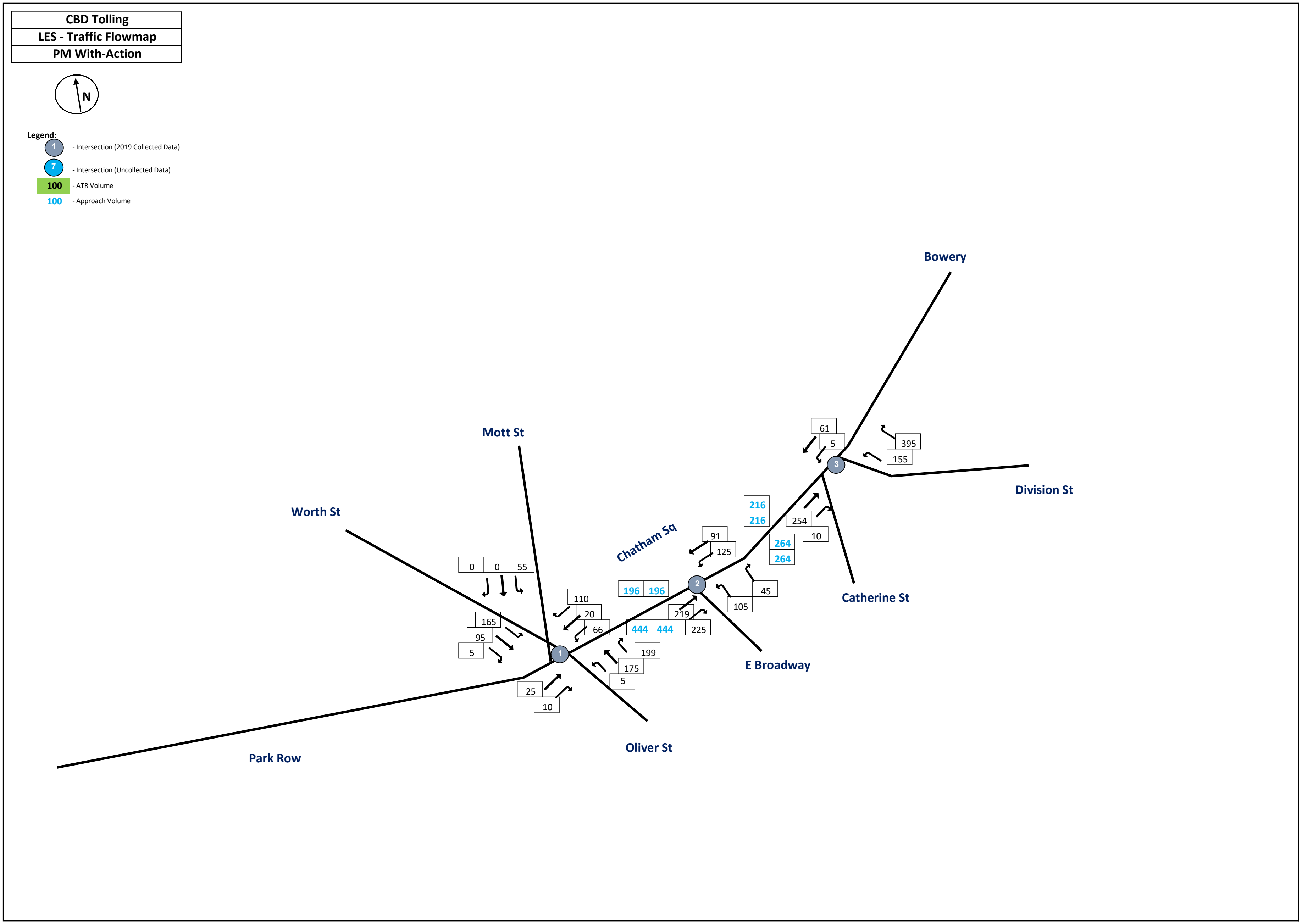

CBD Tolling
LES - Traffic Flowmap
PM With-Action
N
Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume
Bowery
Mott St
Worth St
Chatham Sq
Division St
Catherine St
E Broadway
Oliver St
Park Row
61
5
395
155
216
216
254
10
91
125
264
264
0
0
55
110
20
66
196
196
45
105
219
225
444
444
165
95
5
199
175
5
25
10
1
2
3

LIC **8:00:00 AM**

Intersection	Node	Approach	L2	L	T	R	R2	Total
			Total Vehicles Inbound/Outbound AM Peak Hour					
11th St / Pulaski Brdge & Jackson Ave								
2017 --> 2019 (LIC_1_TMC-6A)	**1**							
Pulaski Bridge / 11th St	1	EB	0	25	55	0	0	
Pulaski Bridge / 11th St	1	WB	0	465	215	0	0	
Jackson Ave	1	NB	0	71	701	406	0	
Jackson Ave	1	SB	0	0	444	64	0	**2446**
11th St / 48th St								
2017 --> 2019 (LIC_1_TMC-6A)	**111**							
11th St	111	EB	0	0	0	0	0	
11th St	111	WB	0	10	25	10	0	
48th St	111	NB	0	65	661	0	0	
48th St	111	SB	0	0	498	15	0	**1284**
Vernon Blvd & 50th Ave								
2019 (TMC-001)	**2**							
50th Ave	2	EB	0	35	64	30	0	
50th Ave	2	WB	0	0	0	0	0	
Vernon Blvd	2	NB	0	0	207	13	0	
Vernon Blvd	2	SB	0	44	163	0	0	**556**
Pulsaki Bridge & Green St								
2019 (TMC-002)	**3**							
Green St	3	EB	0	182	20	40	0	
Green St	3	WB	0	0	0	0	0	
Pulsaki Bridge	3	NB	0	0	1151	30	0	
Pulsaki Btridge	3	SB	0	73	942	0	0	**2438**
Pulsaki Bridge & Freeman St								
2019 (TMC-003)	**4**							
Freeman St	4	EB	0	0	0	0	0	
Freeman St	4	WB	0	0	0	179	0	
Pulsaki Bridge	4	NB	0	0	1333	0	0	
Pulsaki Btridge	4	SB	0	0	1015	115	0	**2642**
49th Ave & 21st St								
2017 --> 2019 (LIC_5_TMC-6C)	**5**							
49th Ave	5	EB	0	36	132	10	0	
49th Ave	5	WB	0	5	40	310	0	
21th Ave	5	NB	0	35	90	40	0	
21th Ave	5	SB	0	98	127	10	0	**933**

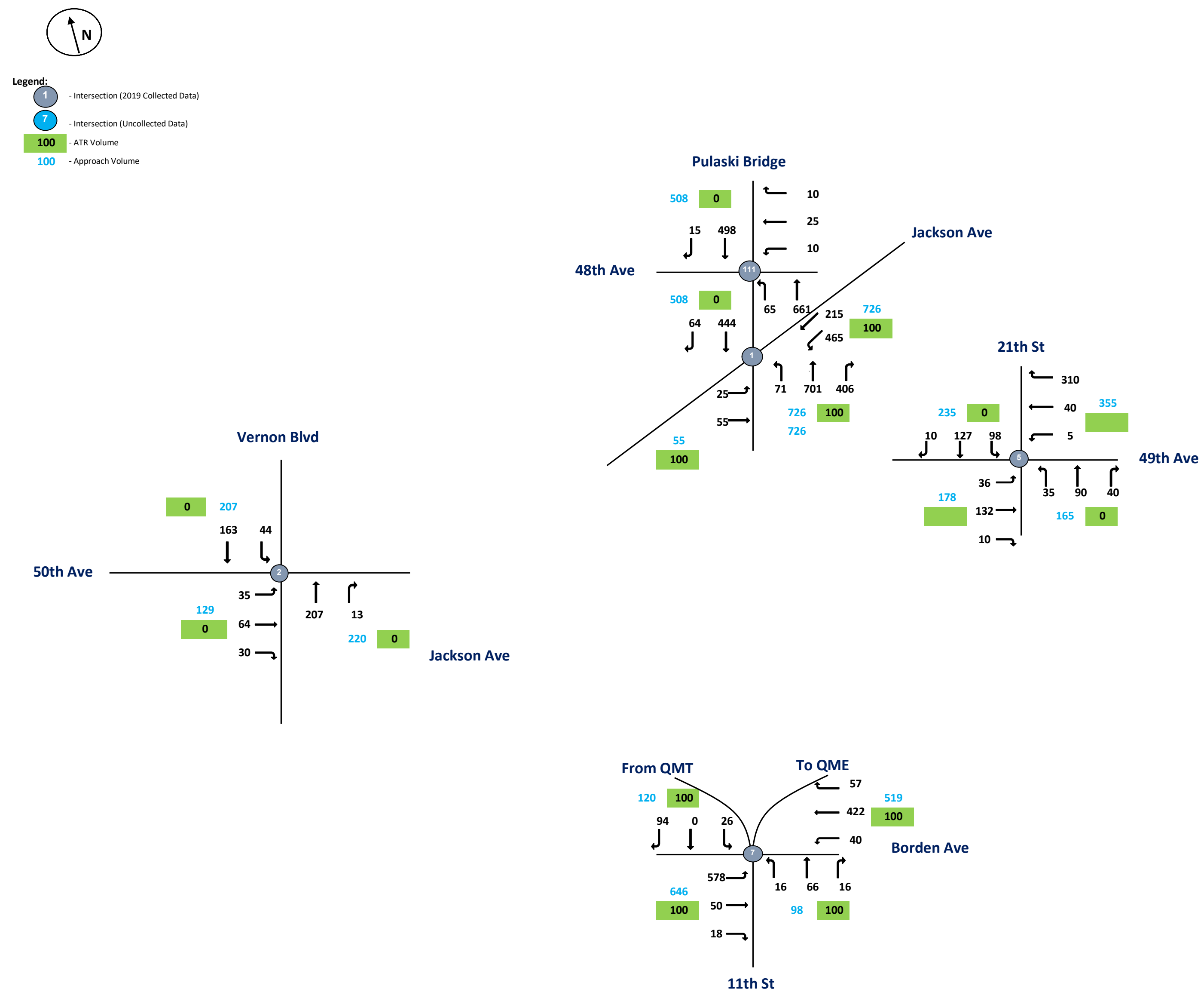
LIC 8:00:00 AM

Intersection	Node	Approach	Total Vehicles Inbound/Outbound AM Peak Hour L2	L	T	R	R2	Total
Borden Ave & 11th Street								
2018 -- 2019 (LIC_7_TMC-6D)	**7**							
Borden Ave	7	EB	0	578	50	18	0	
Borden Ave	7	WB	0	40	422	57	0	
11th St	7	NB	0	16	66	16	0	
11th St	7	SB	0	26	0	94	0	**1383**
Van Dam St & QMT Expwy (North)								
2019 (TMC-004A)	**8**							
QMT Expwy	8	EB	0	0	0	0	0	
QMT Expwy	8	WB	0	0	846	259	0	
Van Dam St	8	NB	0	22	297	0	0	
Van Dam St	8	SB	0	0	769	17	0	**2210**
Van Dam St & QMT Expwy (South)								
2019 (TMC-004B)	**888**							
QMT Expwy	888	EB	0	29	185	15	0	
QMT Expwy	888	WB	0	0	0	0	0	
Van Dam St	888	NB	0	0	290	5	0	
Van Dam St	888	SB	0	588	181	0	0	**1293**
Queens Blvd & Jackson Ave (Mainline)								
2018 --> 2019 (LIC_9A_TMC-6E)	**9**							
Queens Blvd	9	EB	0	0	845	287	0	
Queens Blvd	9	WB	0	50	722	60	0	
Jackson Ave	9	NB	0	0	199	15	0	
Jackson Ave	9	SB	0	15	135	0	0	**2328**
Queens Blvd & Jackson Ave (Service Rd)								
2018 --> 2019 (LIC_9A_TMC-6E)	**9A**							
Queens Blvd	9A	EB	0	0	35	355	0	
Queens Blvd	9A	WB	0	0	0	0	0	
Jackson Ave	9A	NB	0	0	0	0	0	
Jackson Ave	9A	SB	0	0	0	0	0	**390**
Thompson Ave & Queens Blvd								
2018 --> 2019 (LIC_10_TMC-6G)	**10**							
Queens Blvd	10	EB	0	0	0	110	90	
Queens Blvd	10	WB	0	0	1030	0	0	
Thompson Ave	10	NB	0	44	266	0	25	
Thompson Ave	10	SB	0	0	446	15	0	**2026**

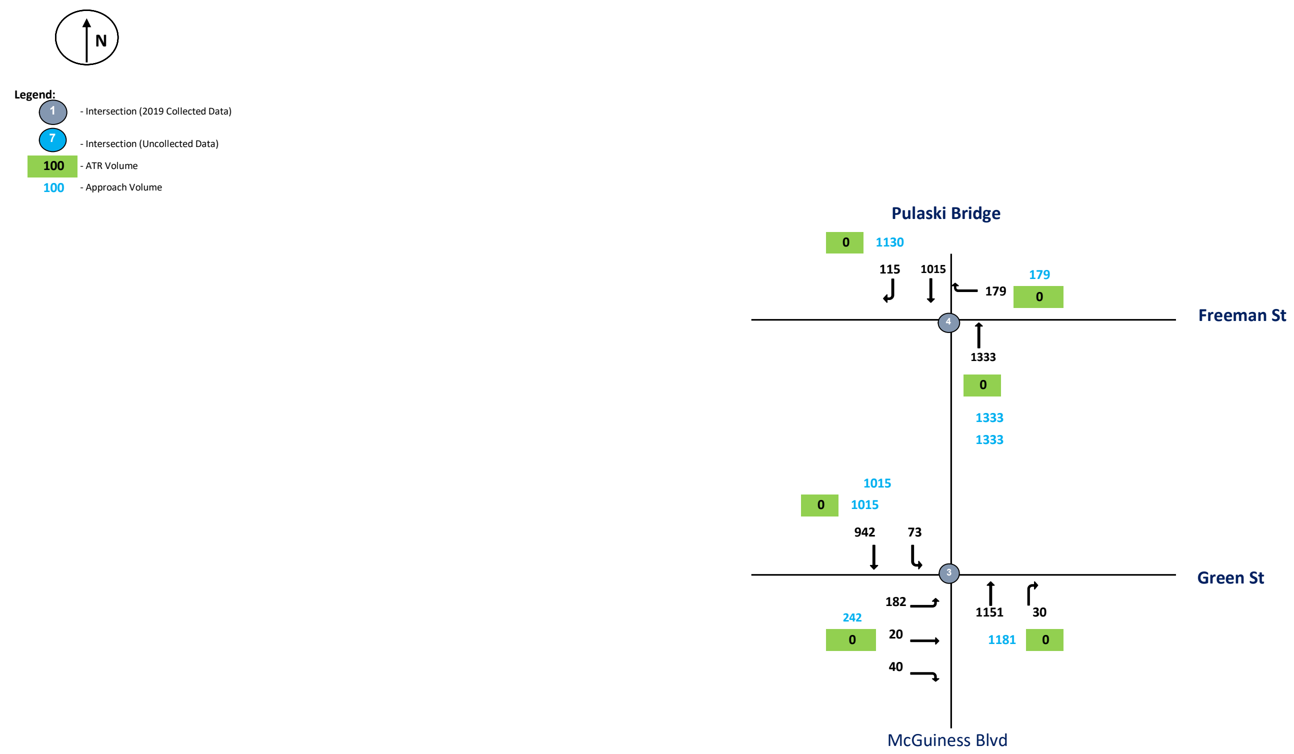
LIC 8:00:00 AM

Intersection	Node	Approach	Total Vehicles Inbound/Outbound AM Peak Hour L2	L	T	R	R2	Total
Dutch Kills St & Thomson Ave (#1)								
2019 (TMC-005)	**11**							
Thomson Ave	11	EB	0	0	388	0	0	
Thomson Ave	11	WB	0	0	385	896	0	
Dutch Kills St	11	NB	0	0	0	0	0	
Dutch Kills St	11	SB	0	0	0	0	0	**1669**
Dutch Kills St & Thomson Ave (#2)								
2019 (TMC-005)	**1111**							
Thomson Ave	1111	EB	0	0	388	0	0	
Thomson Ave	1111	WB	0	0	1281	721	0	
Dutch Kills St	1111	NB	0	0	0	0	0	
Dutch Kills St	1111	SB	0	0	0	0	0	**2390**
21st Street & Queens Plaza North								
2019 (TMC-006)	**12**							
Queens Plaza North	12	EB	0	0	0	0	0	
Queens Plaza North	12	WB	0	120	66	82	0	
21st Street	12	NB	0	0	356	0	0	
21st Street	12	SB	0	0	951	350	0	**1925**

CBD Tolling
LIC - Traffic Flowmap #1
AM With Action



CBD Tolling
LIC - Traffic Flowmap #2
AM With Action



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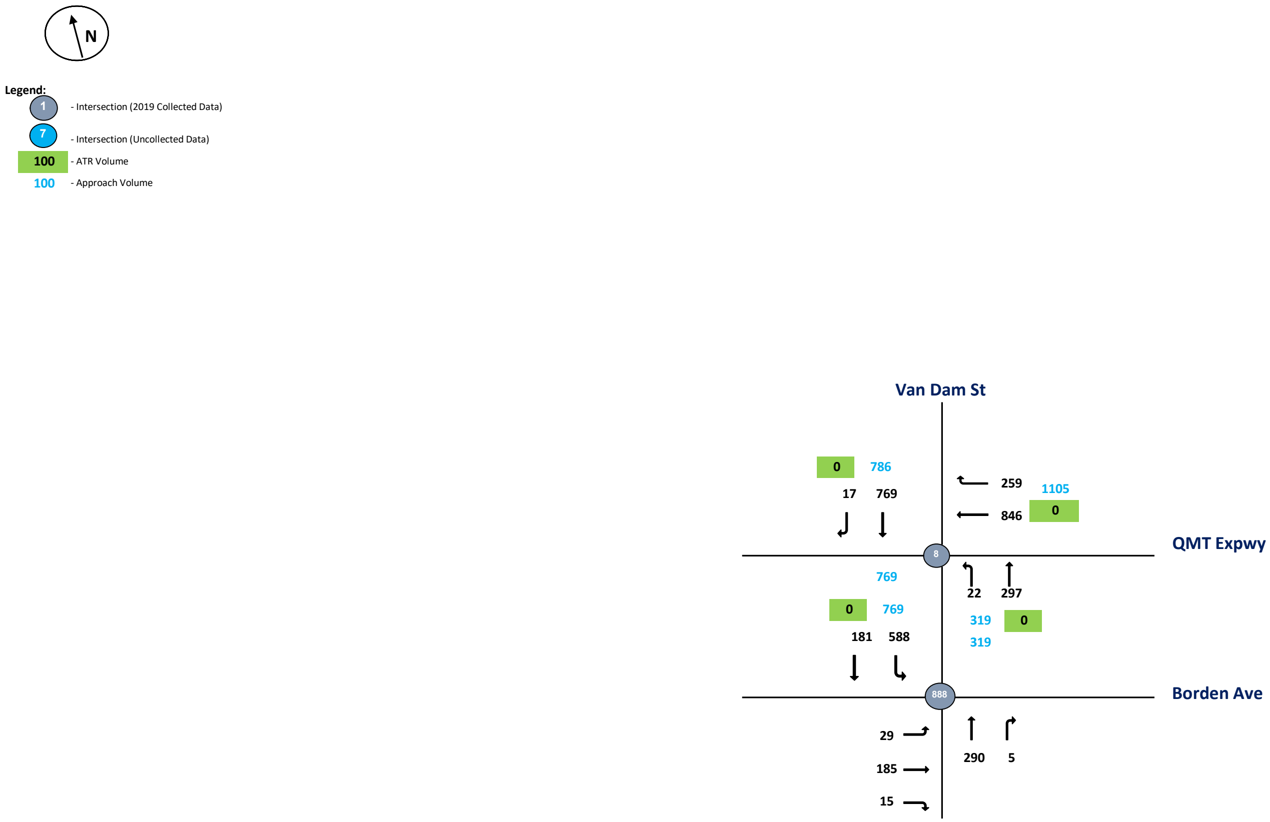
CBD Tolling
LIC - Traffic Flowmap #3
AM With Action



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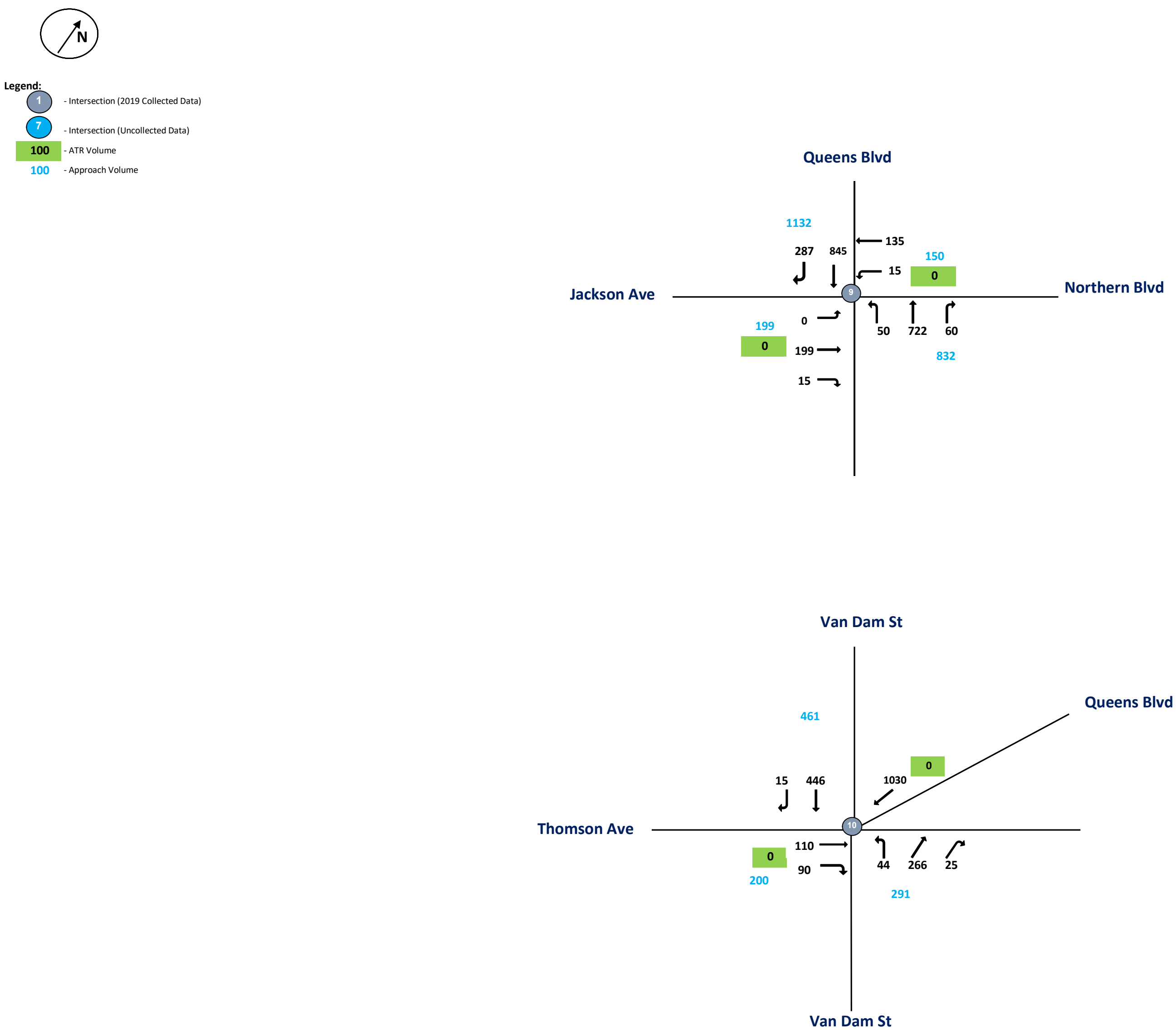
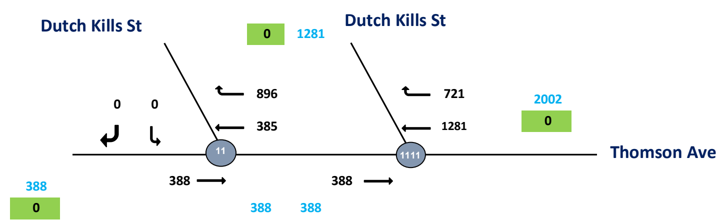
CBD Tolling
LIC - Traffic Flowmap #4
AM With Action



CBD Tolling
LIC - Traffic Flowmap #5
AM With Action

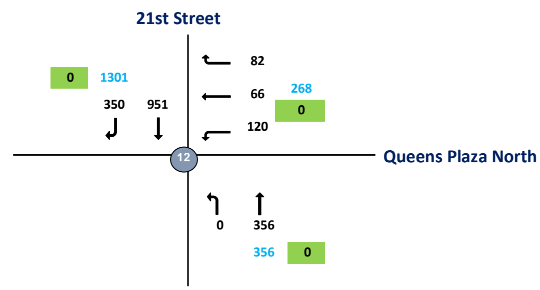
Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume



CBD Tolling
LIC - Traffic Flowmap #6
AM With Action

N

Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume



LM 8:00:00 AM

Intersection	Node	Approach	Total Vehicles Inbound/Outbound AM Peak Hour					
			L2	L	T	R	R2	Total
Edgar St. and Trinity Pl.								
2019 (TMC-010)	**1**							
Edgar St.	1	EB	0	35	0	0	0	
478 Exit Ramp.	1	NE	0	0	0	0	0	
Trinity Pl.	1	NB	0	0	42	0	0	
Trinity Pl.	1	SB	0	0	0	0	0	**77**
Rector St. and Trinity Pl.								
2019 (TMC-011)	**2**							
Rector St.	2	EB	0	100	34	0	0	
Rector St.	2	WB	0	0	0	0	0	
Trinity Pl.	2	NB	0	0	70	7	0	
Trinity Pl.	2	SB	0	0	0	0	0	**211**
West St. and HCT Exit.								
2019 (TMC-012)	**3**							
-	3	EB	0	0	0	0	0	
HCT Exit.	3	WB	0	1692	0	0	0	
West St.	3	NB	0	0	1024	0	444	
West St.	3	SB	0	0	1005	0	0	**4165**
West St. and HCT Exit.								
2019 (TMC-012)	**333**							
W. Thams St.	333	EB	0	0	0	0	0	
HCT Exit.	333	WB	0	0	0	1239	0	
West St.	333	NB	0	0	1024	0	0	
West St.	333	SB	0	0	1005	0	0	**3268**
Chambers St. and Centre St.								
2018	**4**							
Chambers St.	4	EB	0	0	0	393	0	
-	4	WB	0	0	0	0	0	
Centre St.	4	NB	0	396	457	0	0	
Centre St.	4	SB	0	0	213	27	0	**1486**
Hudson St. and Canal St.								
2018	**5**							
Canal St.	5	EB	49	335	555	0	0	
Canal St.	5	WB	0	0	337	73	0	
Hudson St.	5	NB	0	105	670	150	45	
Hudson St.	5	SB	0	0	0	0	0	**2319**

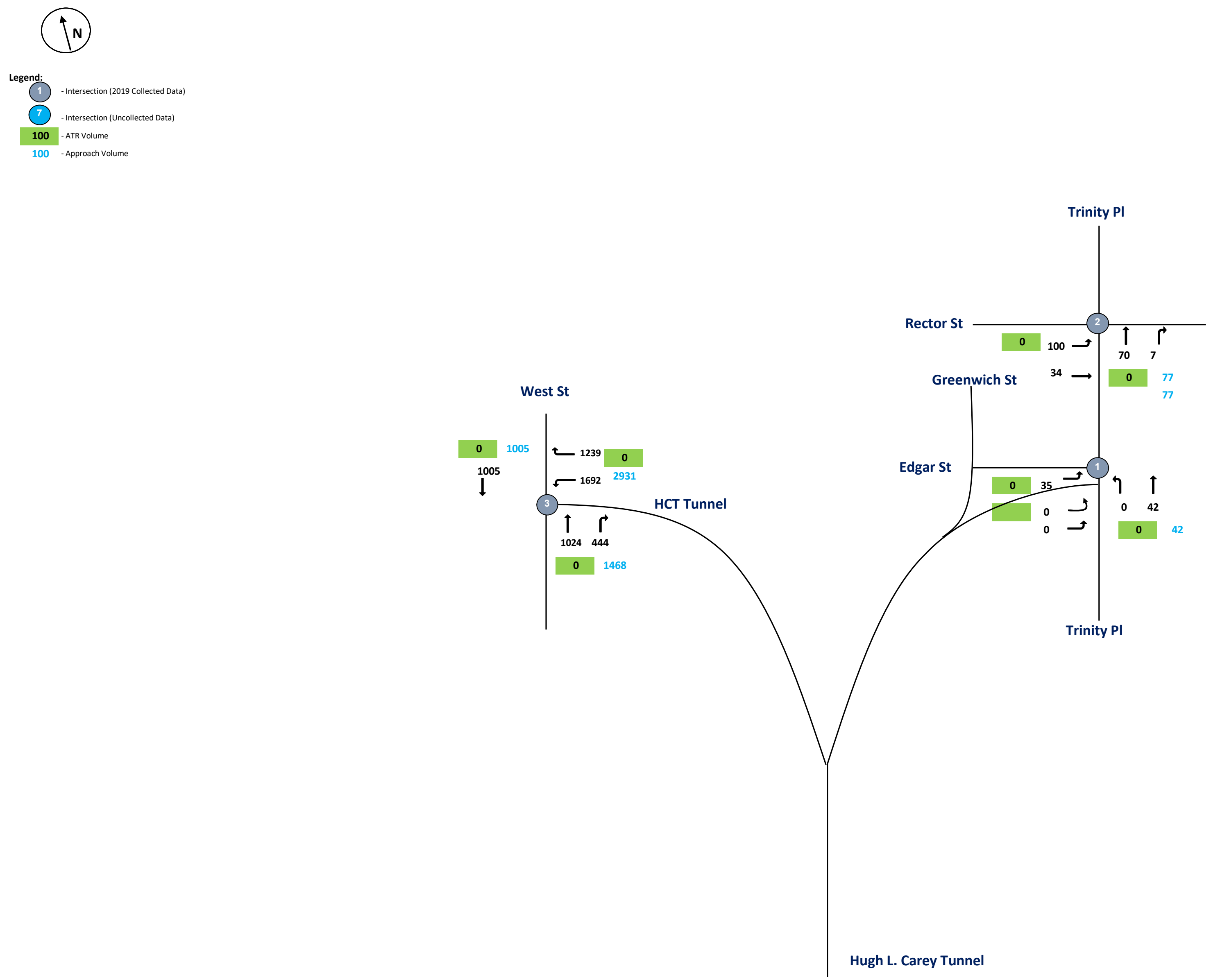
LM 8:00:00 AM

Intersection	Node	Approach	Total Vehicles Inbound/Outbound AM Peak Hour L2	L	T	R	R2	Total
Hudson St. and Canal St.								
2018	**555**							
Canal St.	555	EB	0	0	600	0	0	
Canal St.	555	WB	0	0	410	880	0	
Hudson St.	555	NB	0	0	0	0	0	
Hudson St.	555	SB	0	0	0	0	0	**1890**
West St. and Canal St N.								
2018	**7**							
Canal St N.	7	EB	0	0	0	0	0	
-	7	WB	0	0	0	0	0	
West St.	7	NB	0	0	2659	277	0	
West St.	7	SB	0	675	2105	0	0	**5716**
West St. and Canal St S.								
2018	**777**							
-	777	EB	0	0	0	0	0	
Canal St S.	777	WB	0	0	0	0	0	
West St.	777	NB	0	0	2659	0	0	
West St.	777	SB	0	0	2780	0	0	**5439**
West St. and Albany St.								
2019 (TMC-013)	**9**							
Albany St.	9	EB	0	134	90	64	0	
-	9	WB	0	0	0	0	0	
West St.	9	NB	0	0	2217	92	0	
West St.	9	SB	0	5	1657	136	0	**4395**
West St. and Vesey St.								
2019 (TMC-014)	**10**							
Vesey St.	10	EB	0	104	0	79	0	
Vesey St.	10	WB	0	0	0	0	0	
West St.	10	NB	0	5	2232	0	0	
West St.	10	SB	0	0	1857	321	0	**77**
West St. and Chambers St.								
2019 (TMC-015)	**11**							
Chambers St.	11	EB	0	103	30	15	0	
Chambers St.	11	WB	0	69	60	305	0	
West St.	11	NB	0	0	2240	63	0	
West St.	11	SB	0	222	1775	48	0	**4930**

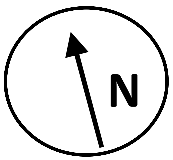
LM 8:00:00 AM

Intersection	Node	Approach	Total Vehicles Inbound/Outbound AM Peak Hour L2	L	T	R	R2	Total
Bowey and Canal St./Manhattan Bridge Off-Ramp								
2018	**14**							
Canal St.	14	EB	0	0	709	103	0	
Manhattan Bridge Off-Ramp	14	WB	0	0	989	0	0	
Bowey	14	NB	0	0	289	284	0	
Bowey	14	SB	0	240	136	74	0	**2824**
Bowey and Manhattan Bridge Off-Ramp								
2018	**15**							
	15	EB	0	0	0	0	0	
Manhattan Bridge Off-Ramp	15	WB	0	0	0	377	0	
Bowey	15	NB	0	0	289	0	0	
Bowey	15	SB	0	0	450	0	0	**1116**
6th Ave. and Watts St								
2018	**18**							
Watts St	18	EB	0	0	0	0	0	
Watts St	18	WB	0	0	718	25	0	
6th Ave.	18	NB	0	72	901	0	0	
6th Ave.	18	SB	0	0	0	0	0	**1716**
6th Ave. and Canal St.								
2018	**19**							
Canal St.	19	EB	0	0	617	0	0	
Canal St.	19	WB	0	0	1148	250	0	
6th Ave.	19	NB	0	157	650	4	0	
Laight St.	19	NE	0	0	0	568	0	**3394**

CBD Tolling
LM - Traffic Flowmap #1
AM With Action

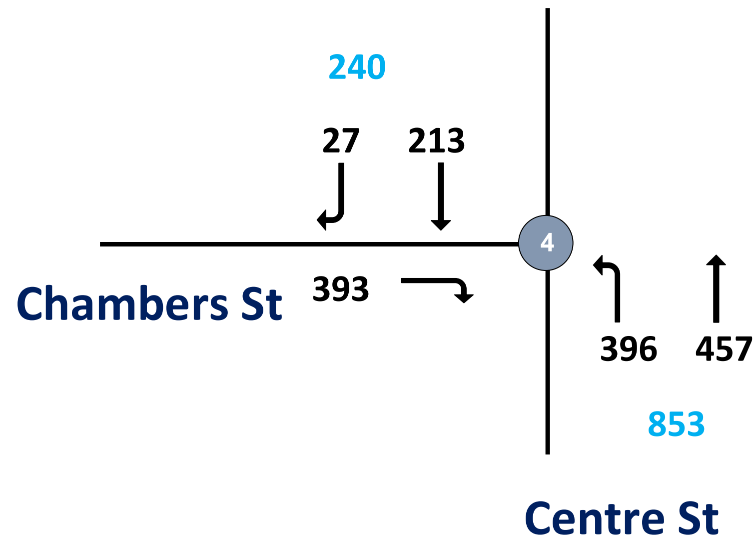


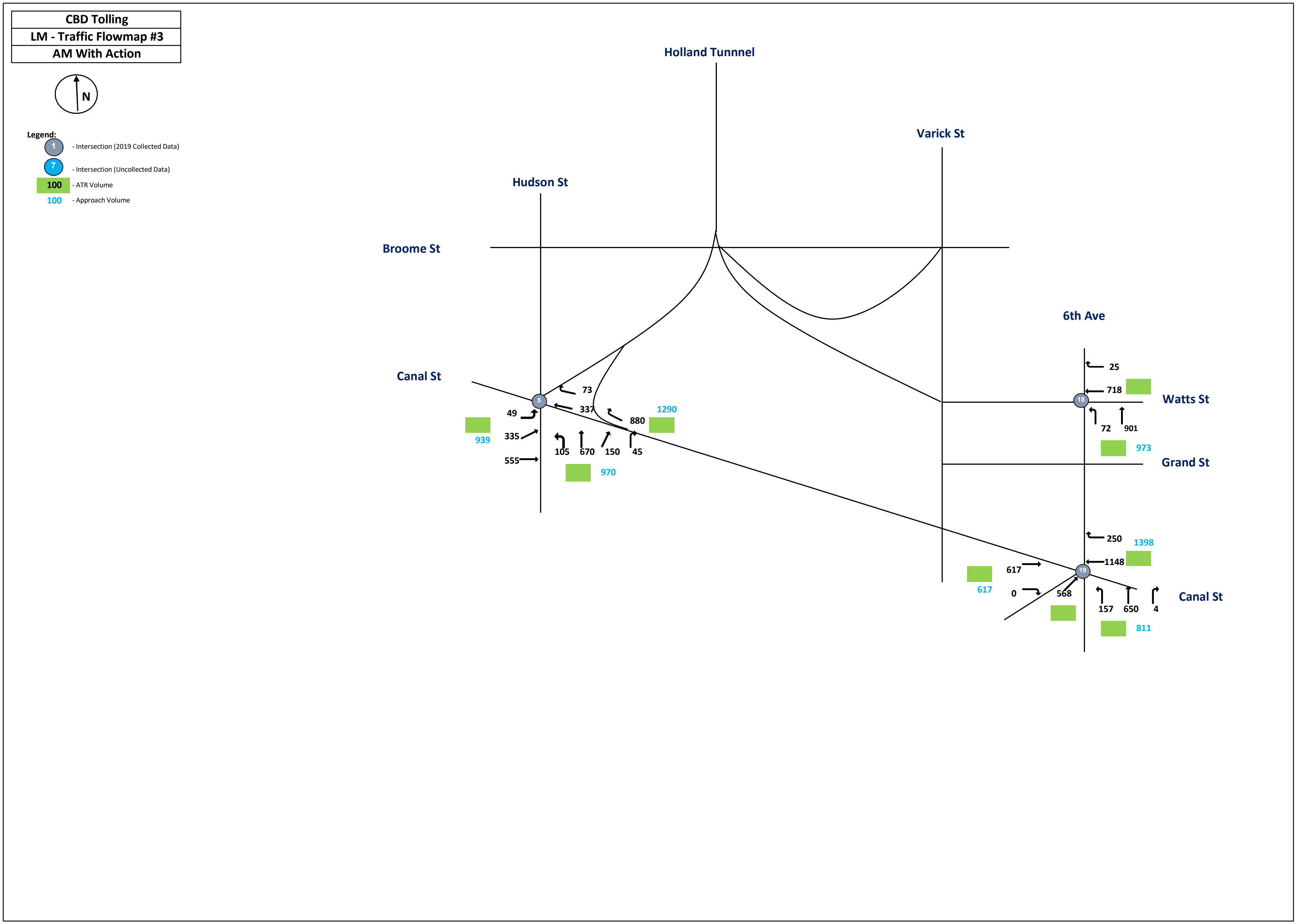
CBD Tolling
LM - Traffic Flowmap #2
AM With Action



Legend:

- 1 - Intersection (2019 Collected Data)
- 7 - Intersection (Uncollected Data)
- 100 - ATR Volume
- 100 - Approach Volume





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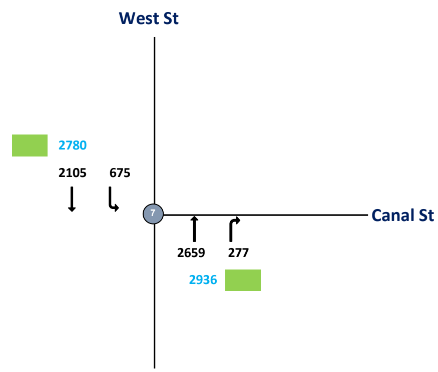
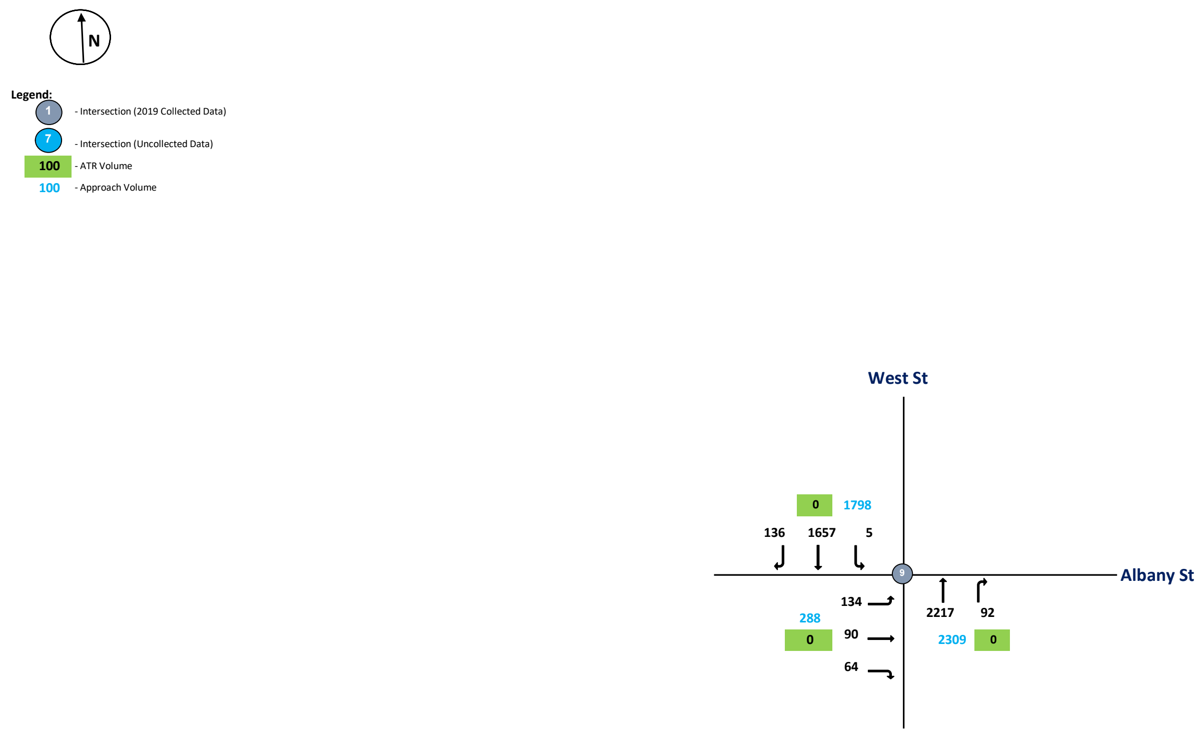
CBD Tolling
LM - Traffic Flowmap #4
AM With Action

Legend:
- Intersection (2019 Collected Data)
- Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume



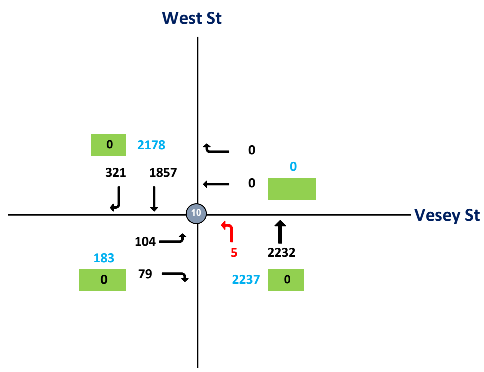
CBD Tolling
LM - Traffic Flowmap #5
AM With Action



CBD Tolling
LM - Traffic Flowmap #6
AM With Action

N

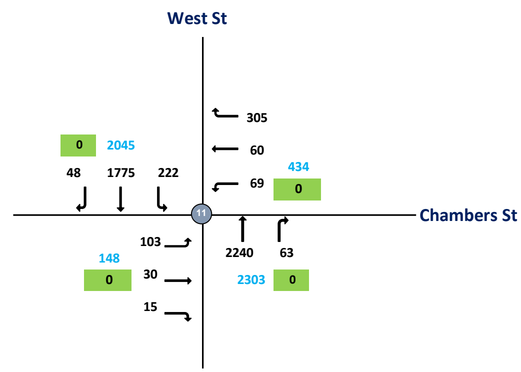
Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume
- Illegal movement



CBD Tolling
LM - Traffic Flowmap #7
AM With Action

N

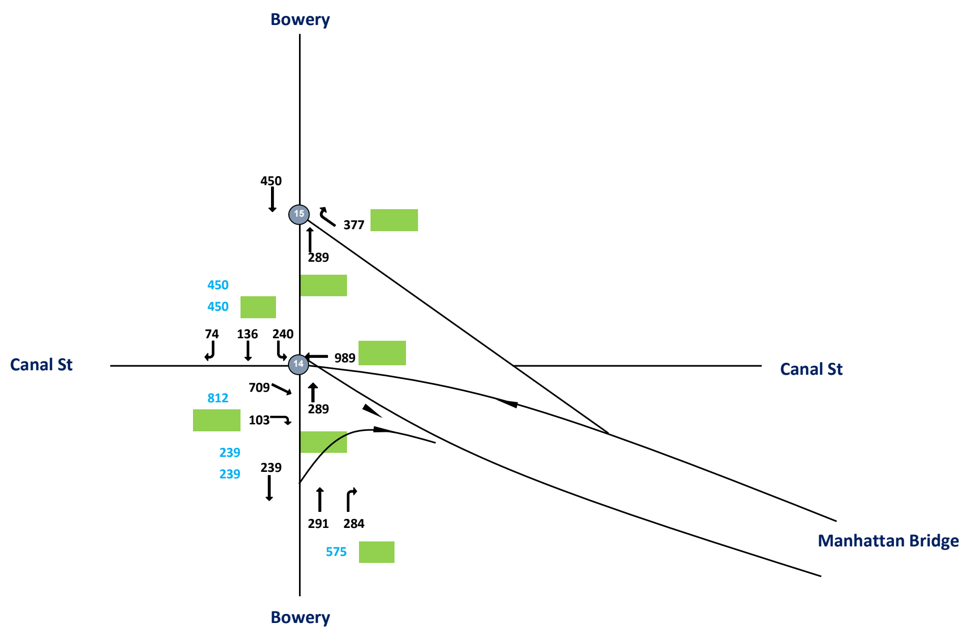
Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume



CBD Tolling
LM - Traffic Flowmap #8
AM With Action

N

Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume



LM 1:00:00 PM

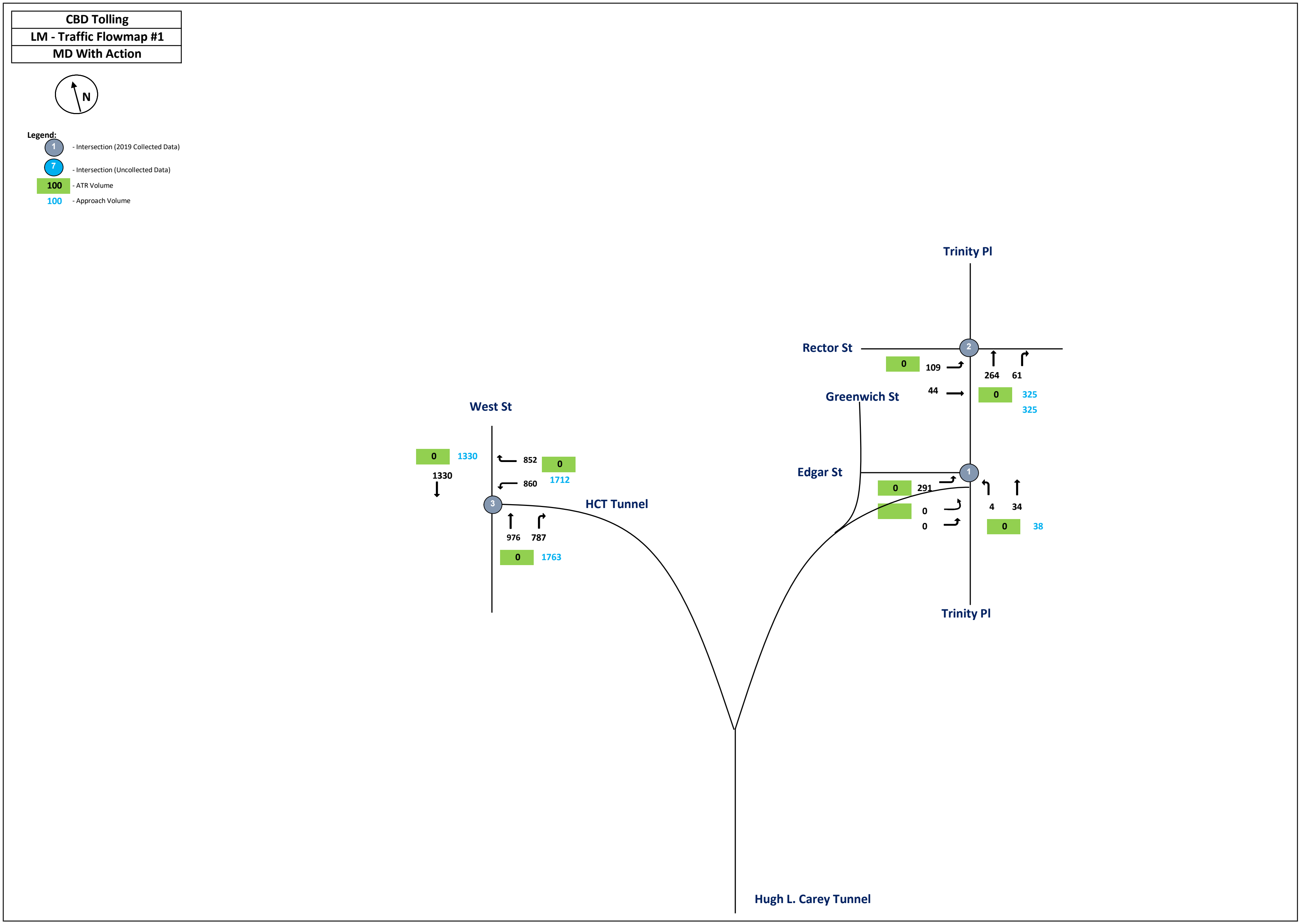
Intersection	Node	Approach	Total Vehicles Inbound/Outbound MD Peak Hour L2	L	T	R	R2	Total
Edgar St. and Trinity Pl.								
2019 (TMC-010)	**1**							
Edgar St.	1	EB	0	291	0	0	0	
478 Exit Ramp.	1	NE	0	0	0	0	0	
Trinity Pl.	1	NB	0	4	34	0	0	
Trinity Pl.	1	SB	0	0	0	0	0	**329**
Rector St. and Trinity Pl.								
2019 (TMC-011)	**2**							
Rector St.	2	EB	0	109	44	0	0	
Rector St.	2	WB	0	0	0	0	0	
Trinity Pl.	2	NB	0	0	264	61	0	
Trinity Pl.	2	SB	0	0	0	0	0	**478**
West St. and HCT Exit.								
2019 (TMC-012)	**3**							
-	3	EB	0	0	0	0	0	
HCT Exit.	3	WB	0	860	0	0	0	
West St.	3	NB	0	0	976	0	787	
West St.	3	SB	0	0	1330	0	0	**3953**
West St. and HCT Exit.								
2019 (TMC-012)	**333**							
W. Thams St.	333	EB	0	0	0	0	0	
HCT Exit.	333	WB	0	0	0	852	0	
West St.	333	NB	0	0	976	0	0	
West St.	333	SB	0	0	1330	0	0	**3158**
Chambers St. and Centre St.								
2018	**4**							
Chambers St.	4	EB	0	0	0	398	0	
-	4	WB	0	0	0	0	0	
Centre St.	4	NB	0	289	364	0	0	
Centre St.	4	SB	0	0	201	13	0	**1265**
Hudson St. and Canal St.								
2018	**5**							
Canal St.	5	EB	30	206	315	0	0	
Canal St.	5	WB	0	0	163	27	0	
Hudson St.	5	NB	0	75	515	214	55	
Hudson St.	5	SB	0	0	0	0	0	**1600**

LM 1:00:00 PM

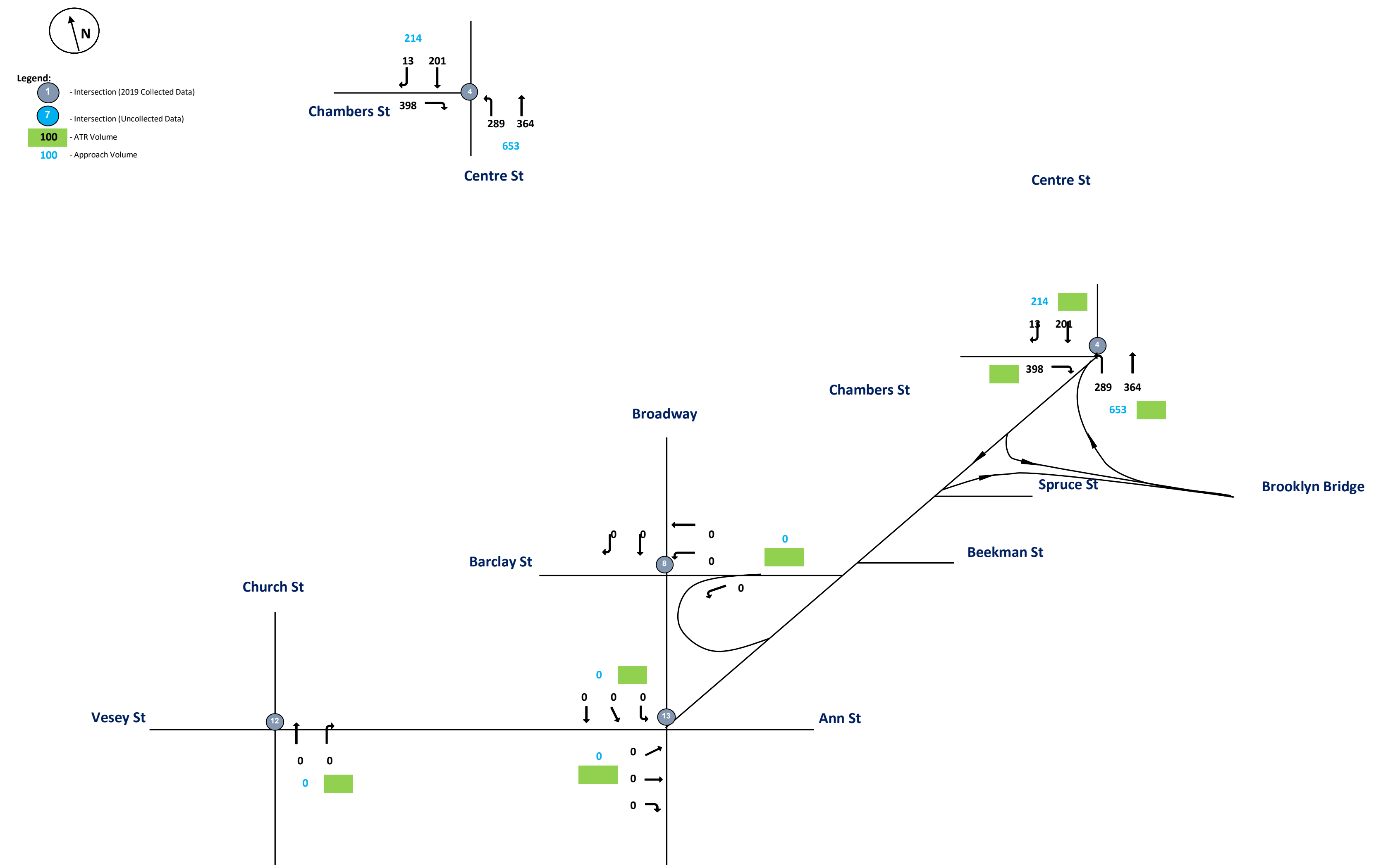
Intersection	Node	Approach	L2	L	T	R	R2	Total
			Total Vehicles					
			Inbound/Outbound					
			MD Peak Hour					
Hudson St. and Canal St.								
2018	**555**							
Canal St.	555	EB	0	0	370	0	0	
Canal St.	555	WB	0	0	190	605	0	
Hudson St.	555	NB	0	0	0	0	0	
Hudson St.	555	SB	0	0	0	0	0	1165
West St. and Canal St N.								
2018	**7**							
Canal St N.	7	EB	0	0	0	0	0	
-	7	WB	0	0	0	0	0	
West St.	7	NB	0	0	2100	141	0	
West St.	7	SB	0	349	1835	0	0	4425
West St. and Canal St S.								
2018	**777**							
-	777	EB	0	0	0	0	0	
Canal St S.	777	WB	0	0	0	0	0	
West St.	777	NB	0	0	2100	0	0	
West St.	777	SB	0	0	2184	0	0	4284
West St. and Albany St.								
2019 (TMC-013)	**9**							
Albany St.	9	EB	0	101	95	63	0	
-	9	WB	0	0	0	0	0	
West St.	9	NB	0	0	1474	85	0	
West St.	9	SB	0	5	2126	86	0	4035
West St. and Vesey St.								
2019 (TMC-014)	**10**							
Vesey St.	10	EB	0	139	0	151	0	
Vesey St.	10	WB	0	0	0	0	0	
West St.	10	NB	0	10	1841	0	0	
West St.	10	SB	0	0	2117	164	0	329
West St. and Chambers St.								
2019 (TMC-015)	**11**							
Chambers St.	11	EB	0	43	0	10	0	
Chambers St.	11	WB	0	73	65	272	0	
West St.	11	NB	0	0	1868	43	0	
West St.	11	SB	0	171	2002	81	0	4628

LM 1:00:00 PM

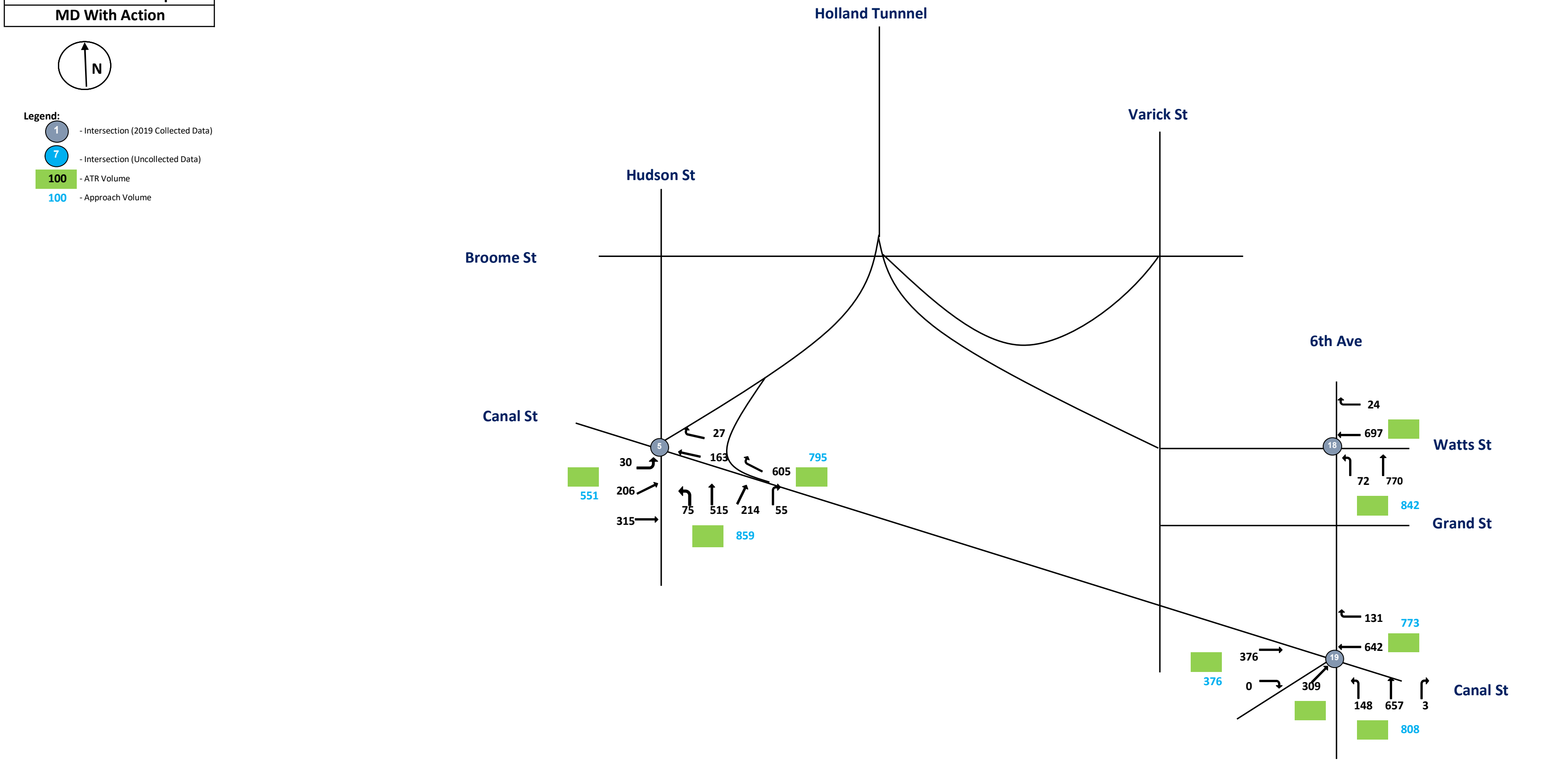
Intersection	Node	Approach	L2	L	T	R	R2	Total
			Total Vehicles					
			Inbound/Outbound					
			MD Peak Hour					
Bowey and Canal St./Manhattan Bridge Off-Ramp								
2018	**14**							
Canal St.	14	EB	0	0	435	123	0	
Manhattan Bridge Off-Ramp	14	WB	0	0	554	0	0	
Bowey	14	NB	0	0	255	293	0	
Bowey	14	SB	0	224	116	65	0	**2065**
Bowey and Manhattan Bridge Off-Ramp								
2018	**15**							
	15	EB	0	0	0	0	0	
Manhattan Bridge Off-Ramp	15	WB	0	0	0	143	0	
Bowey	15	NB	0	0	253	0	0	
Bowey	15	SB	0	0	405	0	0	**801**
6th Ave. and Watts St								
2018	**18**							
Watts St	18	EB	0	0	0	0	0	
Watts St	18	WB	0	0	697	24	0	
6th Ave.	18	NB	0	72	770	0	0	
6th Ave.	18	SB	0	0	0	0	0	**1563**
6th Ave. and Canal St.								
2018	**19**							
Canal St.	19	EB	0	0	376	0	0	
Canal St.	19	WB	0	0	642	131	0	
6th Ave.	19	NB	0	148	657	3	0	
Laight St.	19	NE	0	0	0	309	0	**2266**


CBD Tolling
LM - Traffic Flowmap #1
MD With Action
N
Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume
Trinity Pl
Rector St
2
0
109
264
61
44
0
325
325
Greenwich St
West St
0
1330
852
0
1330
860
1712
Edgar St
1
0
291
4
34
0
0
0
38
3
HCT Tunnel
976
787
0
1763
Trinity Pl
Hugh L. Carey Tunnel

CBD Tolling
LM - Traffic Flowmap #2
MD With Action



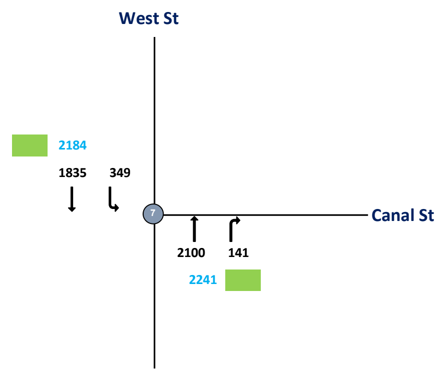
CBD Tolling
LM - Traffic Flowmap #3
MD With Action



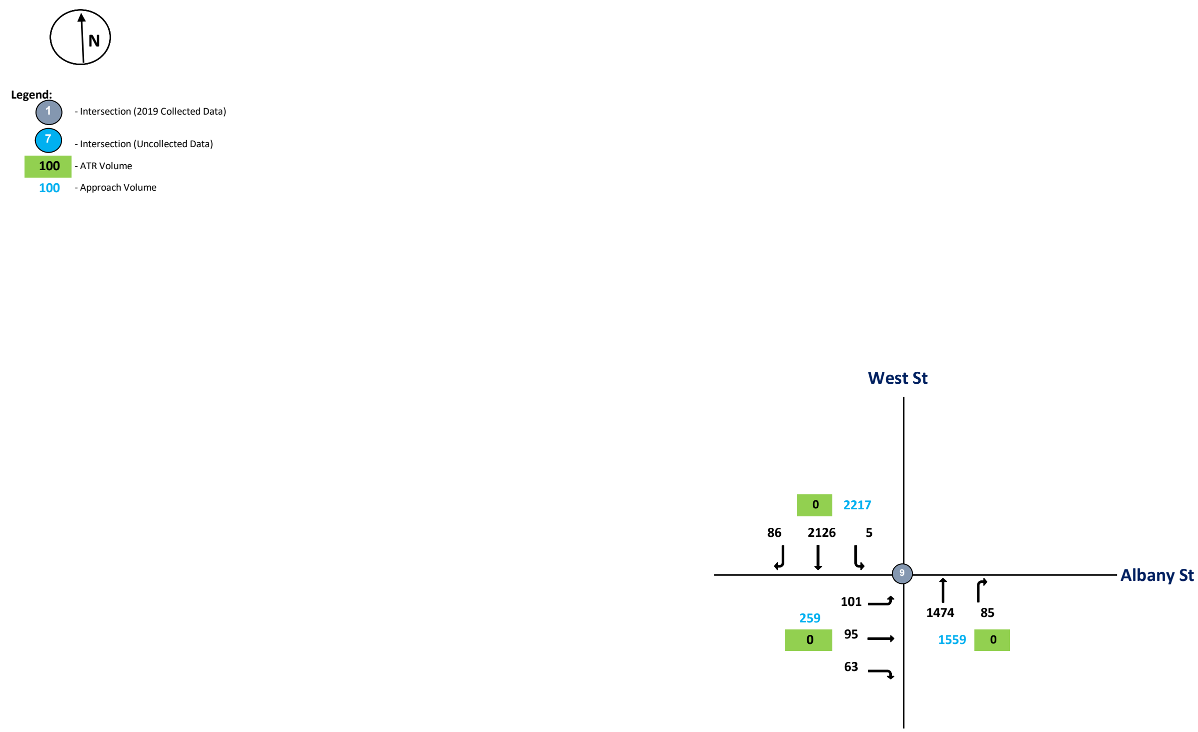
CBD Tolling
LM - Traffic Flowmap #4
MD With Action

N

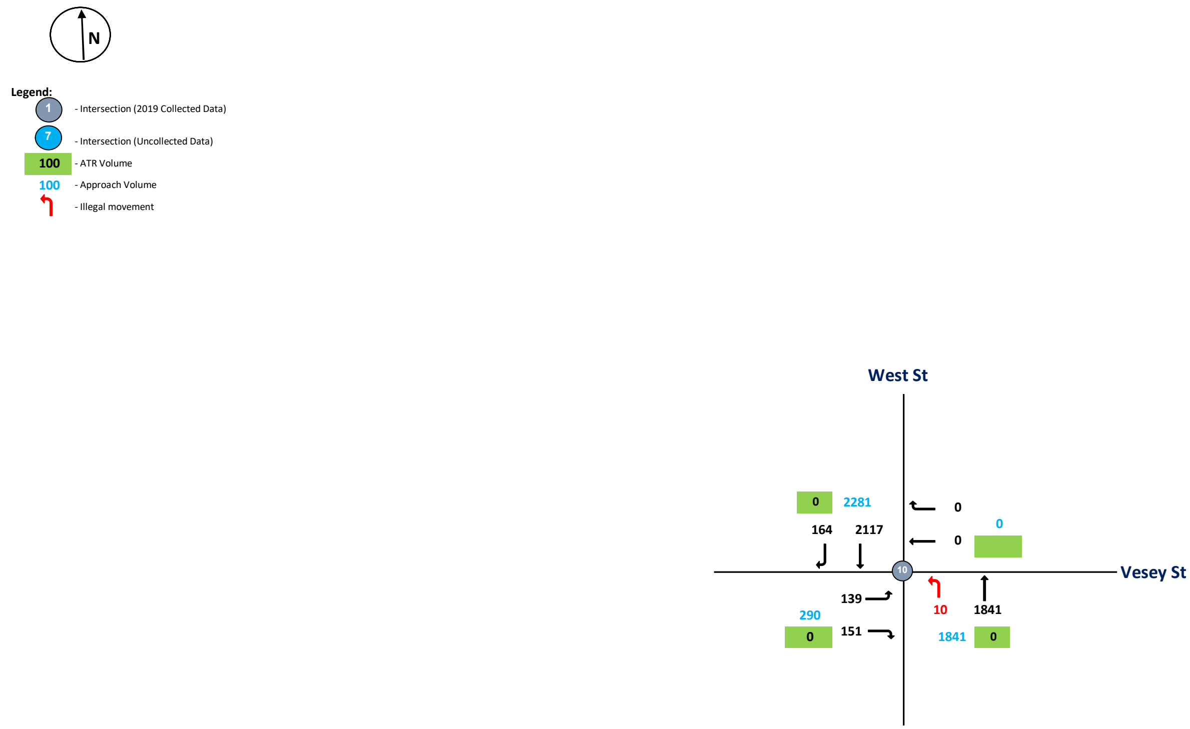
Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume



CBD Tolling
LM - Traffic Flowmap #5
MD With Action

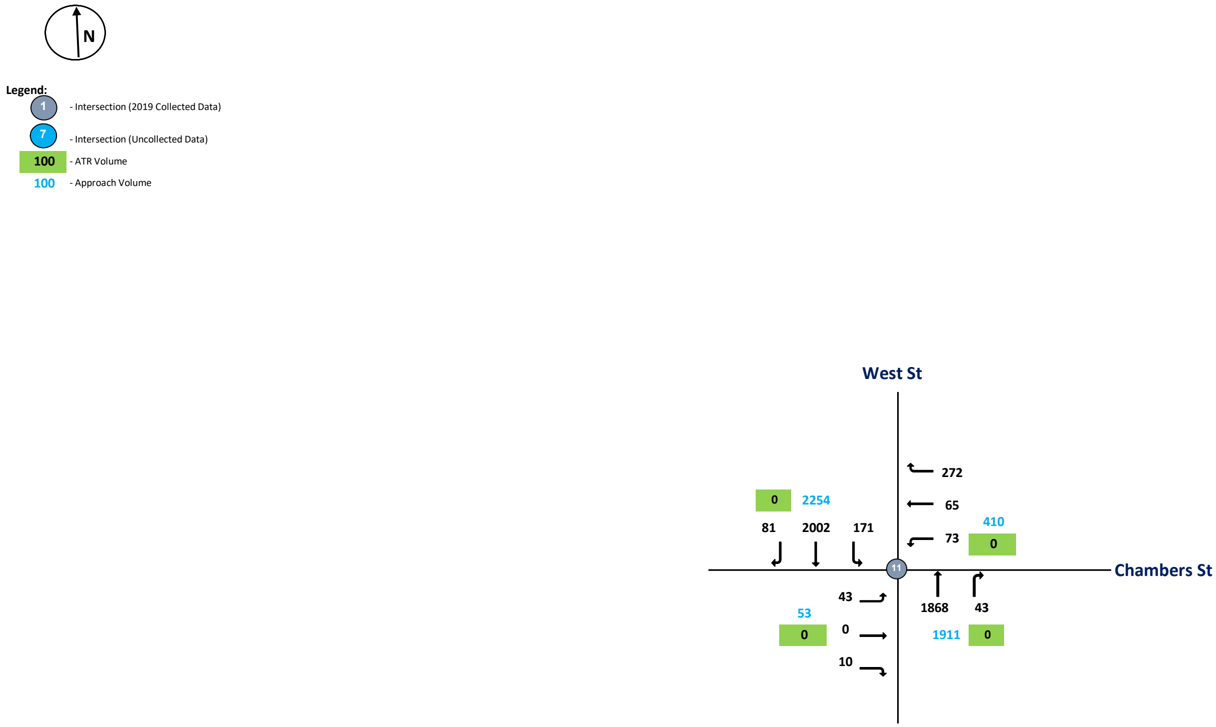


CBD Tolling
LM - Traffic Flowmap #6
MD With Action

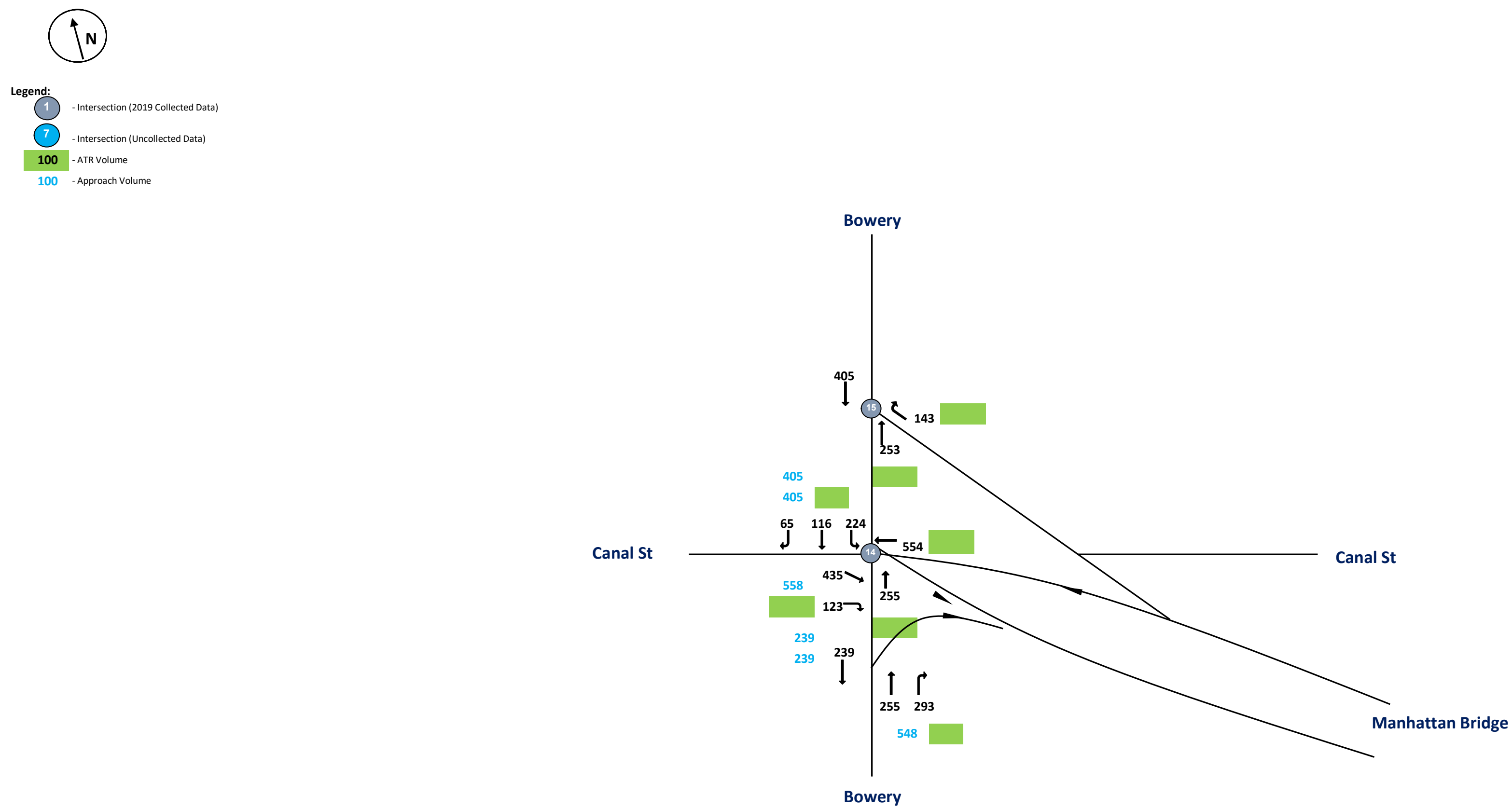


DRAFT, PRIVILEGED, AND CONFIDENTIAL

CBD Tolling
LM - Traffic Flowmap #7
MD With Action



CBD Tolling
LM - Traffic Flowmap #8
MD With Action



LM 5:00:00 PM

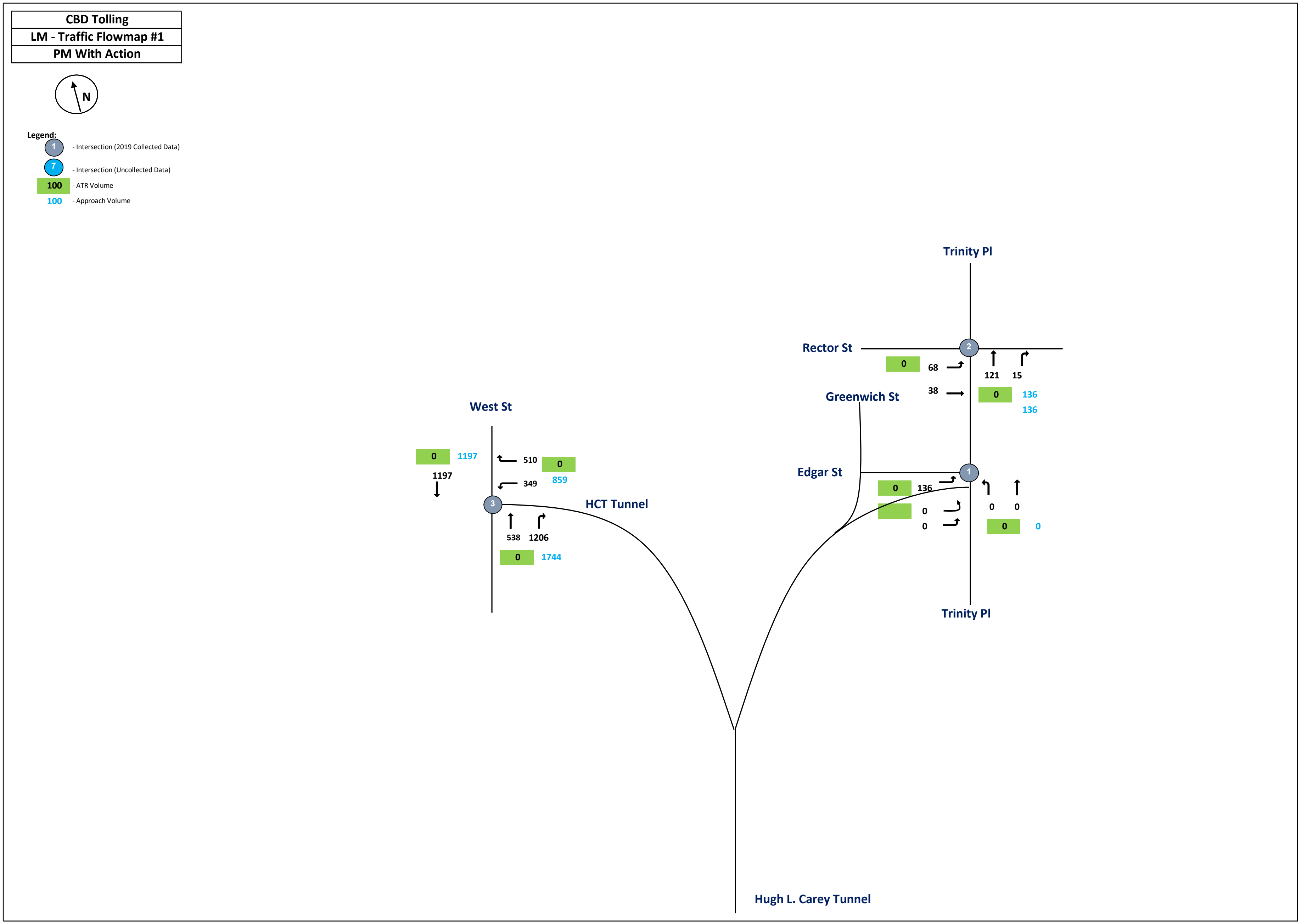
Intersection	Node	Approach	Total Vehicles Inbound/Outbound PM Peak Hour L2	L	T	R	R2	Total
Edgar St. and Trinity Pl.								
2019 (TMC-010)	**1**							
Edgar St.	1	EB	0	136	0	0	0	
478 Exit Ramp.	1	NE	0	0	0	0	0	
Trinity Pl.	1	NB	0	0	0	0	0	
Trinity Pl.	1	SB	0	0	0	0	0	**136**
Rector St. and Trinity Pl.								
2019 (TMC-011)	**2**							
Rector St.	2	EB	0	68	38	0	0	
Rector St.	2	WB	0	0	0	0	0	
Trinity Pl.	2	NB	0	0	121	15	0	
Trinity Pl.	2	SB	0	0	0	0	0	**242**
West St. and HCT Exit.								
2019 (TMC-012)	**3**							
-	3	EB	0	0	0	0	0	
HCT Exit.	3	WB	0	349	0	0	0	
West St.	3	NB	0	0	538	0	1206	
West St.	3	SB	0	0	1197	0	0	**3290**
West St. and HCT Exit.								
2019 (TMC-012)	**333**							
W. Thams St.	333	EB	0	0	0	0	0	
HCT Exit.	333	WB	0	0	0	510	0	
West St.	333	NB	0	0	538	0	0	
West St.	333	SB	0	0	1197	0	0	**2245**
Chambers St. and Centre St.								
2018	**4**							
Chambers St.	4	EB	0	0	0	464	0	
-	4	WB	0	0	0	0	0	
Centre St.	4	NB	0	374	448	0	0	
Centre St.	4	SB	0	0	290	12	0	**1588**
Hudson St. and Canal St.								
2018	**5**							
Canal St.	5	EB	5	178	419	0	0	
Canal St.	5	WB	0	0	0	0	0	
Hudson St.	5	NB	0	45	585	159	8	
Hudson St.	5	SB	0	0	0	0	0	**1399**

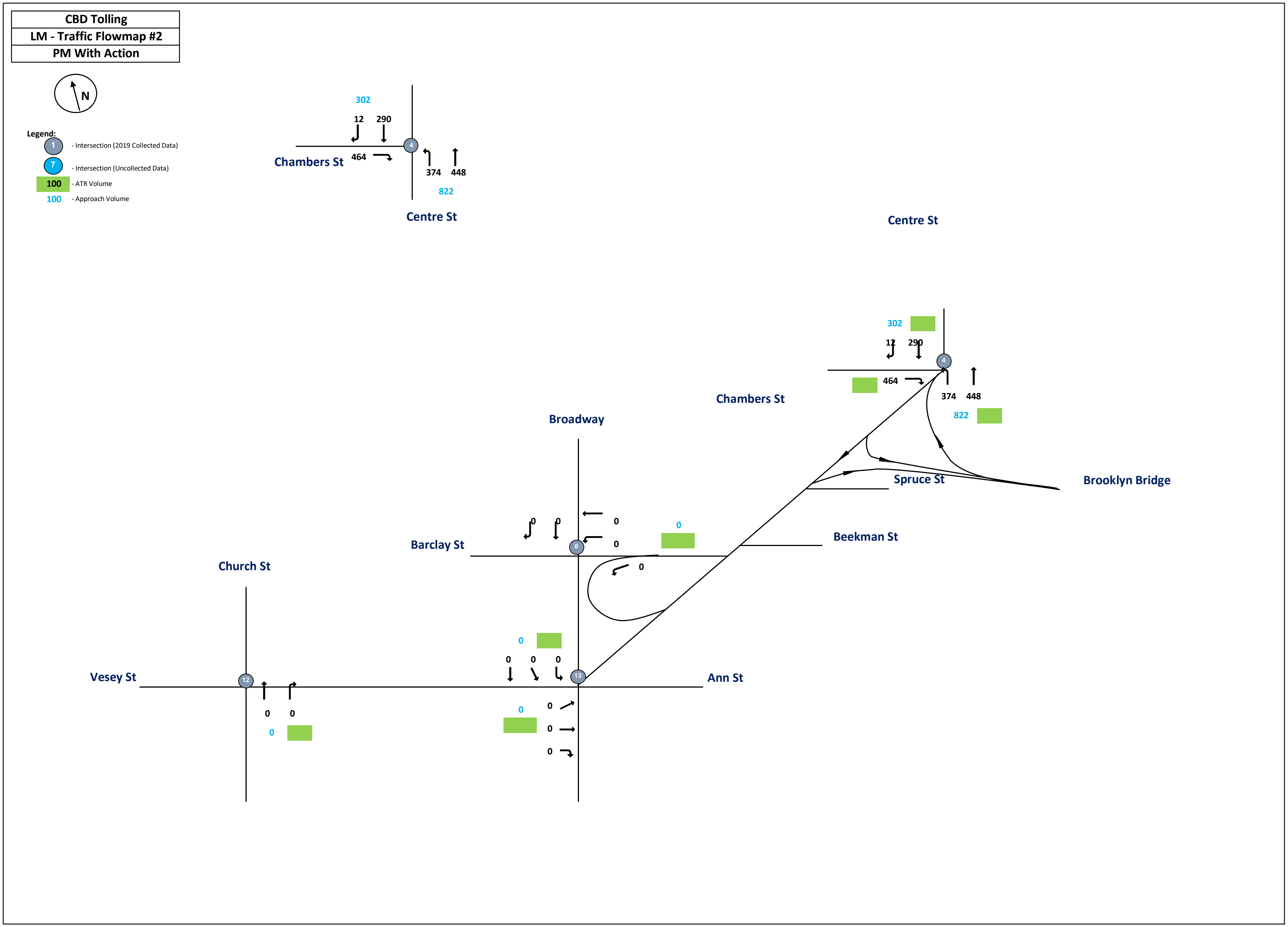
LM 5:00:00 PM

Intersection	Node	Approach	L2	L	T	R	R2	Total
			Total Vehicles					
			Inbound/Outbound					
			PM Peak Hour					
Hudson St. and Canal St.								
2018	**555**							
Canal St.	555	EB	0	0	427	0	0	
Canal St.	555	WB	0	0	0	1405	0	
Hudson St.	555	NB	0	0	0	0	0	
Hudson St.	555	SB	0	0	0	0	0	**1832**
West St. and Canal St N.								
2018	**7**							
Canal St N.	7	EB	0	0	0	0	0	
-	7	WB	0	0	0	0	0	
West St.	7	NB	0	0	2629	5	0	
West St.	7	SB	0	484	1734	0	0	**4852**
West St. and Canal St S.								
2018	**777**							
-	777	EB	0	0	0	0	0	
Canal St S.	777	WB	0	0	0	0	0	
West St.	777	NB	0	0	2629	0	0	
West St.	777	SB	0	0	2218	0	0	**4847**
West St. and Albany St.								
2019 (TMC-013)	**9**							
Albany St.	9	EB	0	139	90	81	0	
-	9	WB	0	0	0	0	0	
West St.	9	NB	0	0	1227	47	0	
West St.	9	SB	0	0	2192	76	0	**3852**
West St. and Vesey St.								
2019 (TMC-014)	**10**							
Vesey St.	10	EB	0	99	0	121	0	
Vesey St.	10	WB	0	10	0	0	0	
West St.	10	NB	0	0	1462	0	0	
West St.	10	SB	0	0	2345	134	0	**136**
West St. and Chambers St.								
2019 (TMC-015)	**11**							
Chambers St.	11	EB	0	49	20	5	0	
Chambers St.	11	WB	0	126	90	392	0	
West St.	11	NB	0	0	1754	35	0	
West St.	11	SB	0	183	1809	90	0	**4553**

LM 5:00:00 PM

Intersection	Node	Approach	Total Vehicles Inbound/Outbound PM Peak Hour					
			L2	L	T	R	R2	Total
Bowey and Canal St./Manhattan Bridge Off-Ramp								
2018	**14**							
Canal St.	14	EB	0	0	800	83	0	
Manhattan Bridge Off-Ramp	14	WB	0	0	347	0	0	
Bowey	14	NB	0	0	167	472	0	
Bowey	14	SB	0	400	46	16	0	**2331**
Bowey and Manhattan Bridge Off-Ramp								
2018	**15**							
	15	EB	0	0	0	0	0	
Manhattan Bridge Off-Ramp	15	WB	0	0	0	222	0	
Bowey	15	NB	0	0	167	0	0	
Bowey	15	SB	0	0	462	0	0	**851**
6th Ave. and Watts St								
2018	**18**							
Watts St	18	EB	0	0	0	0	0	
Watts St	18	WB	0	0	195	0	0	
6th Ave.	18	NB	0	132	483	0	0	
6th Ave.	18	SB	0	0	0	0	0	**810**
6th Ave. and Canal St.								
2018	**19**							
Canal St.	19	EB	0	0	351	0	0	
Canal St.	19	WB	0	0	1247	9	0	
6th Ave.	19	NB	0	37	591	3	0	
Laight St.	19	NE	0	0	0	346	0	**2584**


CBD Tolling
LM - Traffic Flowmap #1
PM With Action
N
Legend:
1
- Intersection (2019 Collected Data)
7
- Intersection (Uncollected Data)
100
- ATR Volume
100
- Approach Volume
Trinity Pl
Rector St
2
0
68
121
15
38
0
136
136
Greenwich St
West St
0
1197
1197
510
0
349
859
Edgar St
1
0
136
0
0
0
0
0
0
3
HCT Tunnel
538
1206
0
1744
Trinity Pl
Hugh L. Carey Tunnel



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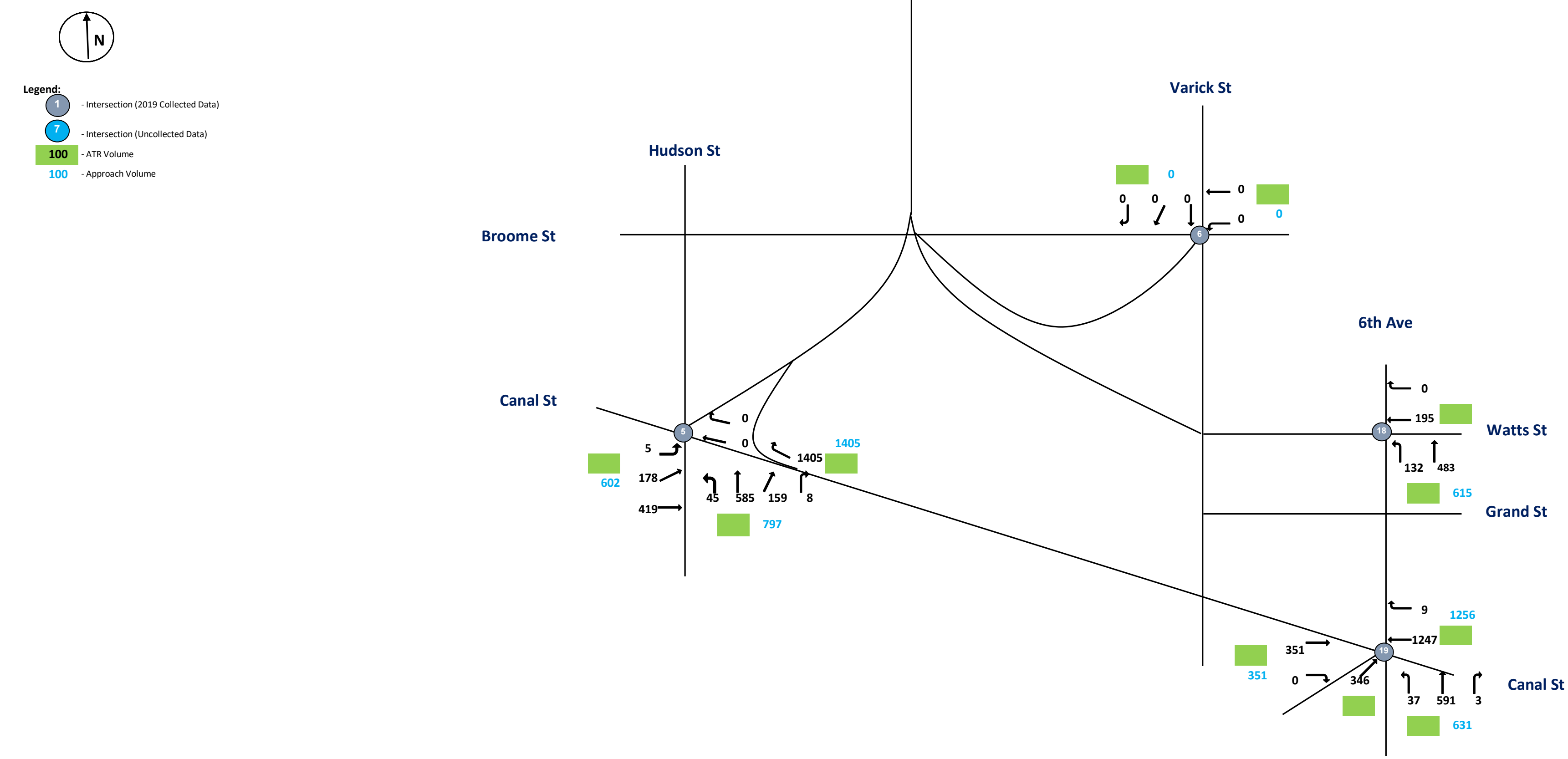
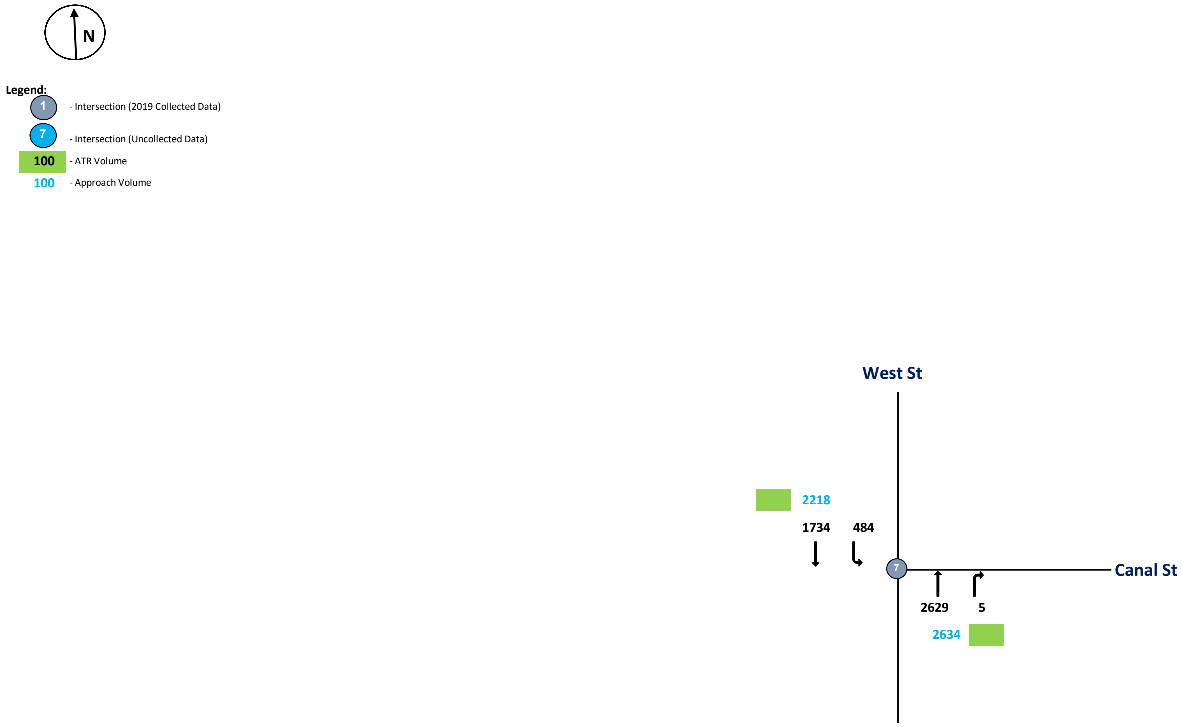
CBD Tolling
LM - Traffic Flowmap #3
PM With Action



DRAFT, PRIVILEGED, AND CONFIDENTIAL

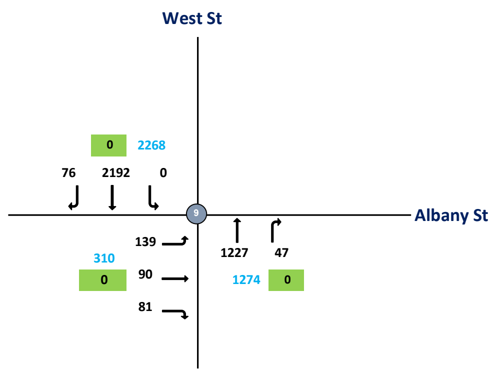
CBD Tolling
LM - Traffic Flowmap #4
PM With Action



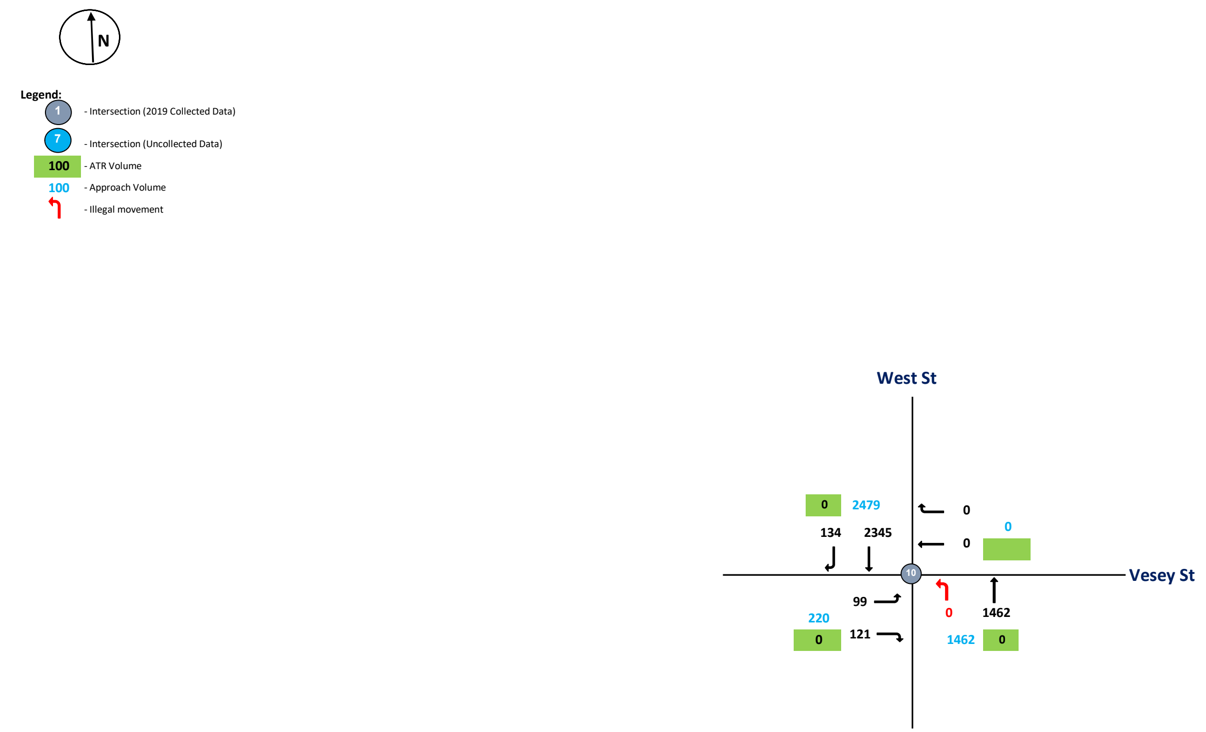
CBD Tolling
LM - Traffic Flowmap #5
PM With Action

N

Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume



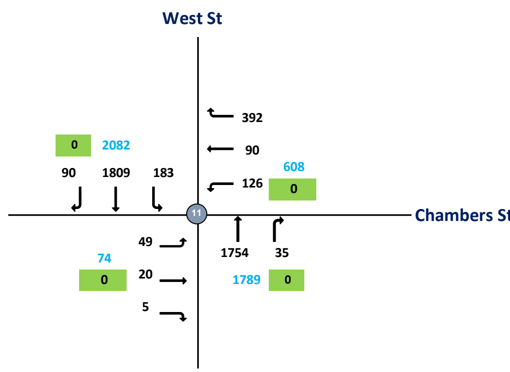
CBD Tolling
LM - Traffic Flowmap #6
PM With Action



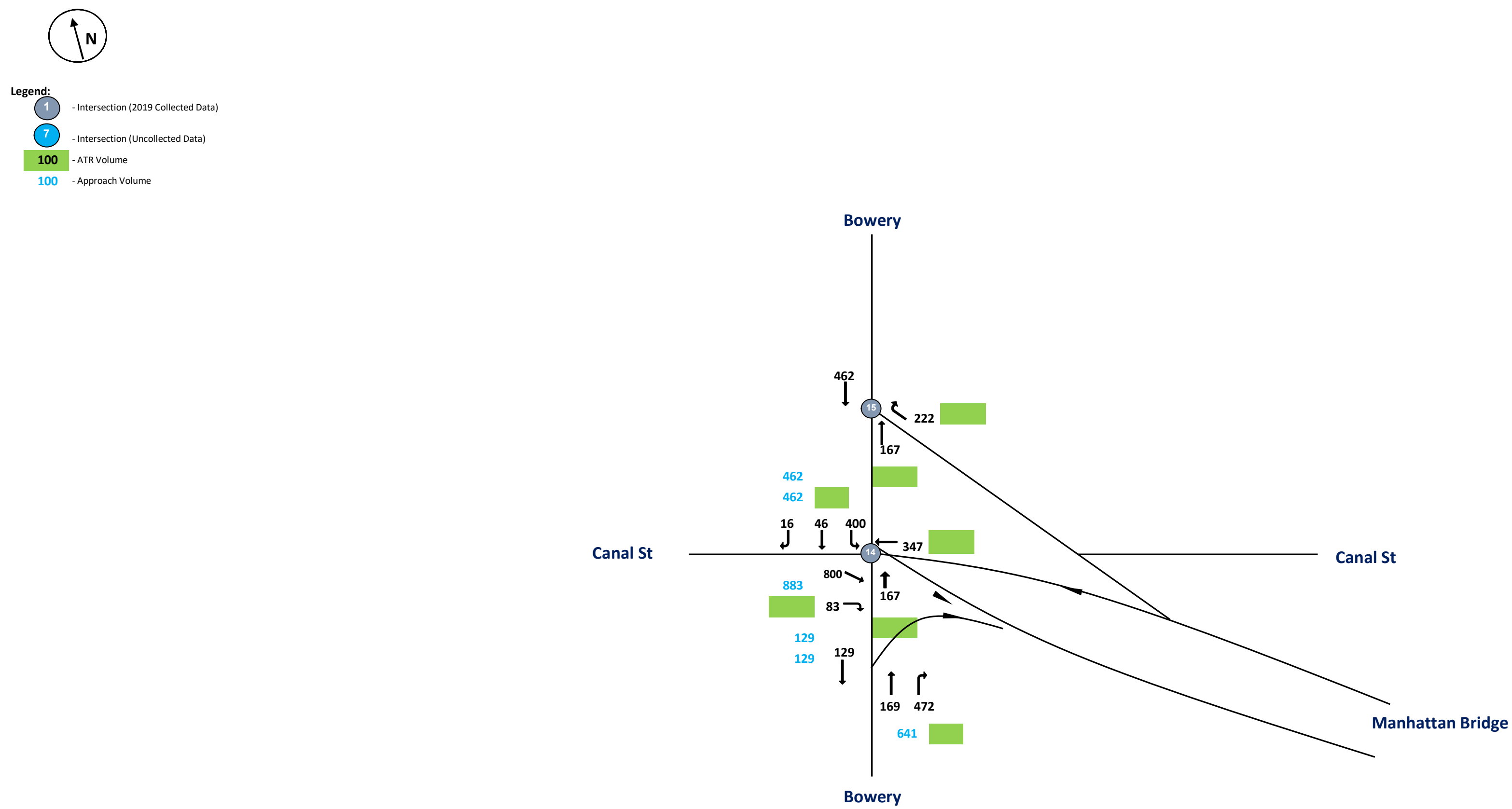
CBD Tolling
LM - Traffic Flowmap #7
PM With Action

N

Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume

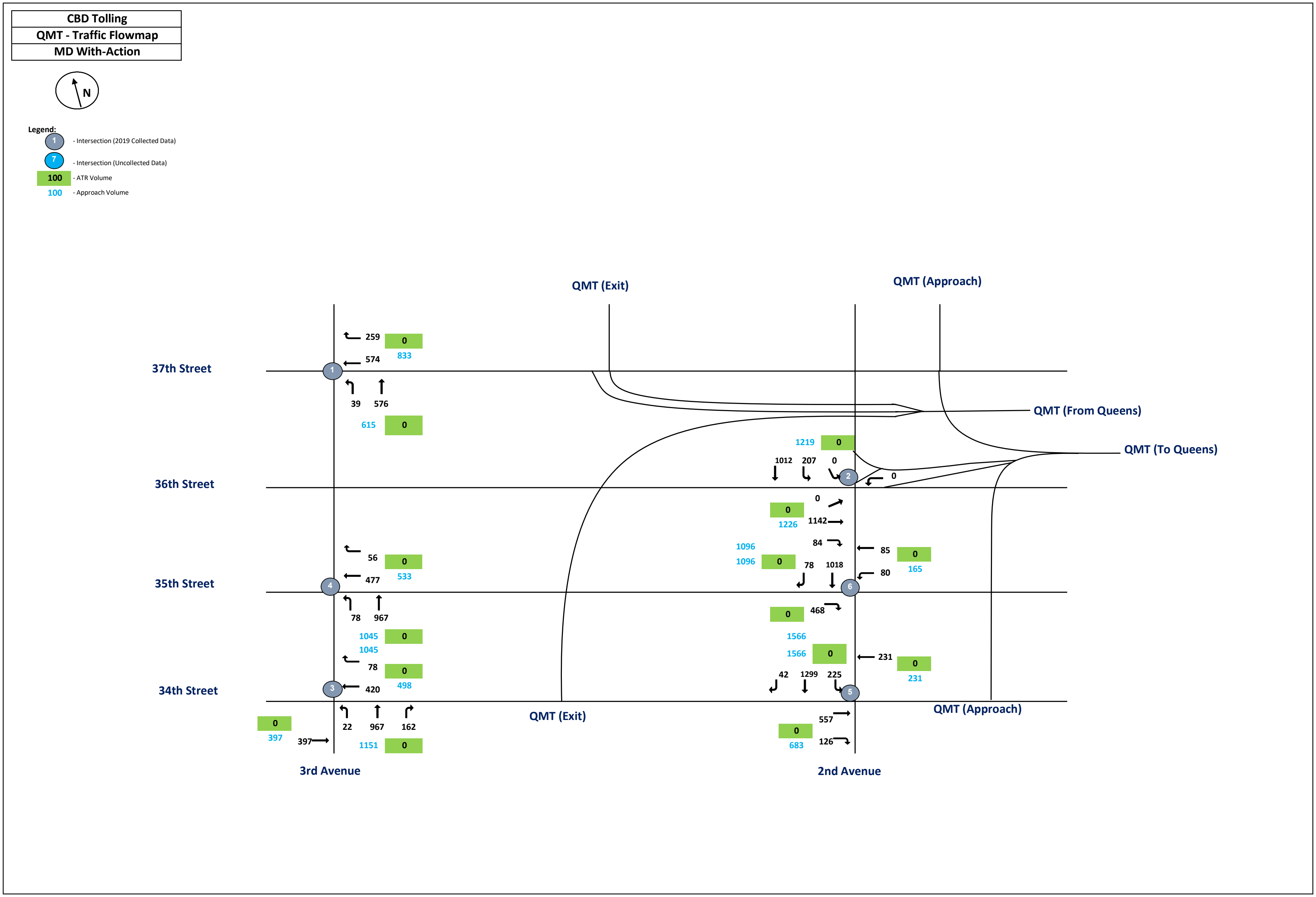


CBD Tolling
LM - Traffic Flowmap #8
PM With Action



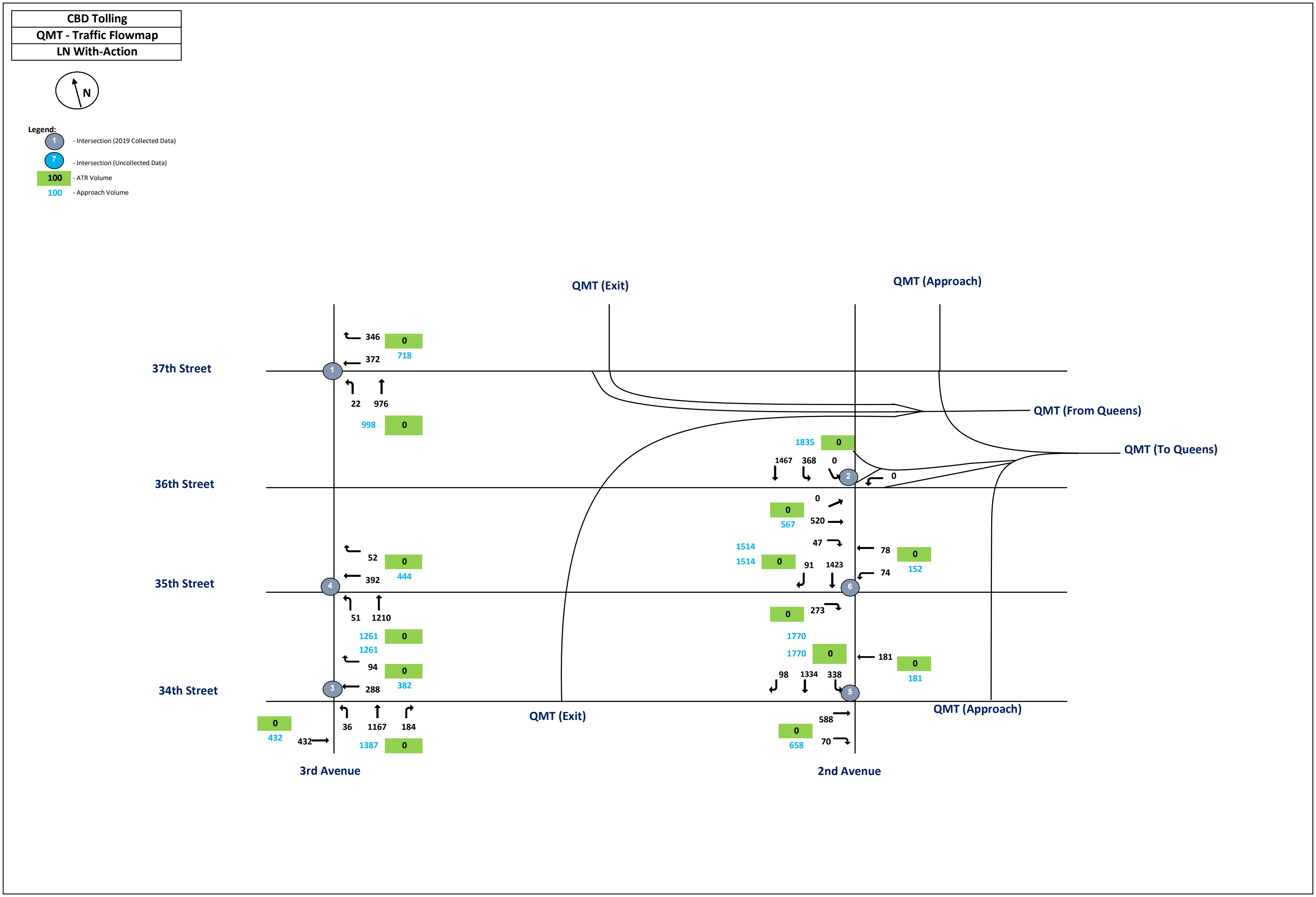
QMT 1:00:00 PM

Intersection	Node	Approach	Total Vehicles Inbound/Outbound MD Peak Hour L2	L	T	R	R2	Total
37th St & 3rd Ave								
2019 (TMC-016)	**1**							
37th St	1	EB	0	0	0	0	0	
37th St	1	WB	0	0	574	259	0	
3rd Ave	1	NB	0	39	576	0	0	
3rd Ave	1	SB	0	0	0	0	0	**1448**
36th St & 2nd Ave								
2019 (TMC-017)	**2**							
36th St	2	EB	0	0	1142	84	0	
36th St	2	WB	0	0	0	0	0	
2nd Ave	2	NB	0	0	0	0	0	
2nd Ave	2	SB	0	207	1012	0	0	**2445**
34th St & 3rd Ave								
2019 (TMC-018)	**3**							
34th St	3	EB	0	0	397	0	0	
34th St	3	WB	0	0	420	78	0	
3rd Ave	3	NB	0	22	967	162	0	
	3	SB	0	0	0	0	0	**2046**
35th St & 3rd Ave								
2019 (TMC-019)	**4**							
35th St	4	EB	0	0	0	0	0	
35th St	4	WB	0	0	477	56	0	
3rd Ave	4	NB	0	78	967	0	0	
	4	SB	0	0	0	0	0	**1578**
34th St & 2nd Ave								
2019 (TMC-020)	**5**							
34th St	5	EB	0	0	557	126	0	
34th St	5	WB	0	0	231	0	0	
2nd Ave	5	NB	0	0	0	0	0	
2nd Ave	5	SB	0	225	1299	42	0	**2480**
35th St & 2nd Ave								
2019 (TMC-021)	**6**							
35th St	6	EB	0	0	0	468	0	
35th St	6	WB	0	80	85	0	0	
2nd Ave	6	NB	0	0	0	0	0	
2nd Ave	6	SB	0	0	1018	78	0	**1729**


CBD Tolling
QMT - Traffic Flowmap
MD With-Action
N
Legend:
- Intersection (2019 Collected Data)
- Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume
QMT (Exit)
QMT (Approach)
37th Street
36th Street
35th Street
34th Street
QMT (From Queens)
QMT (To Queens)
3rd Avenue
2nd Avenue
259
574
833
39
576
615
56
477
533
78
967
1045
1045
78
420
498
22
967
162
397
397
1151
1219
1012
207
0
1226
1142
1096
1096
84
78
1018
85
165
80
468
1566
1566
231
231
42
1299
225
557
683
126

QMT 9:00:00 PM

Intersection	Node	Approach	L2	L	T	R	R2	Total
			Total Vehicles Inbound/Outbound LN Peak Hour					
37th St & 3rd Ave								
2019 (TMC-016)	**1**							
37th St	1	EB	0	0	0	0	0	
37th St	1	WB	0	0	372	346	0	
3rd Ave	1	NB	0	22	976	0	0	
3rd Ave	1	SB	0	0	0	0	0	**1716**
36th St & 2nd Ave								
2019 (TMC-017)	**2**							
36th St	2	EB	0	0	520	47	0	
36th St	2	WB	0	0	0	0	0	
2nd Ave	2	NB	0	0	0	0	0	
2nd Ave	2	SB	0	368	1467	0	0	**2402**
34th St & 3rd Ave								
2019 (TMC-018)	**3**							
34th St	3	EB	0	0	432	0	0	
34th St	3	WB	0	0	288	94	0	
3rd Ave	3	NB	0	36	1167	184	0	
	3	SB	0	0	0	0	0	**2201**
35th St & 3rd Ave								
2019 (TMC-019)	**4**							
35th St	4	EB	0	0	0	0	0	
35th St	4	WB	0	0	392	52	0	
3rd Ave	4	NB	0	51	1210	0	0	
	4	SB	0	0	0	0	0	**1705**
34th St & 2nd Ave								
2019 (TMC-020)	**5**							
34th St	5	EB	0	0	588	70	0	
34th St	5	WB	0	0	181	0	0	
2nd Ave	5	NB	0	0	0	0	0	
2nd Ave	5	SB	0	338	1334	98	0	**2609**
35th St & 2nd Ave								
2019 (TMC-021)	**6**							
35th St	6	EB	0	0	0	273	0	
35th St	6	WB	0	74	78	0	0	
2nd Ave	6	NB	0	0	0	0	0	
2nd Ave	6	SB	0	0	1423	91	0	**1939**


CBD Tolling
QMT - Traffic Flowmap
LN With-Action
N
Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume
QMT (Exit)
QMT (Approach)
QMT (From Queens)
QMT (To Queens)
37th Street
36th Street
35th Street
34th Street
3rd Avenue
2nd Avenue
346
372
718
22
976
998
1835
1467
368
0
567
520
47
1514
78
152
74
91
1423
52
444
392
51
1210
1261
273
1770
181
94
382
288
98
1334
338
36
1167
184
432
1387
588
658
70

RFK-B 8:00 AM

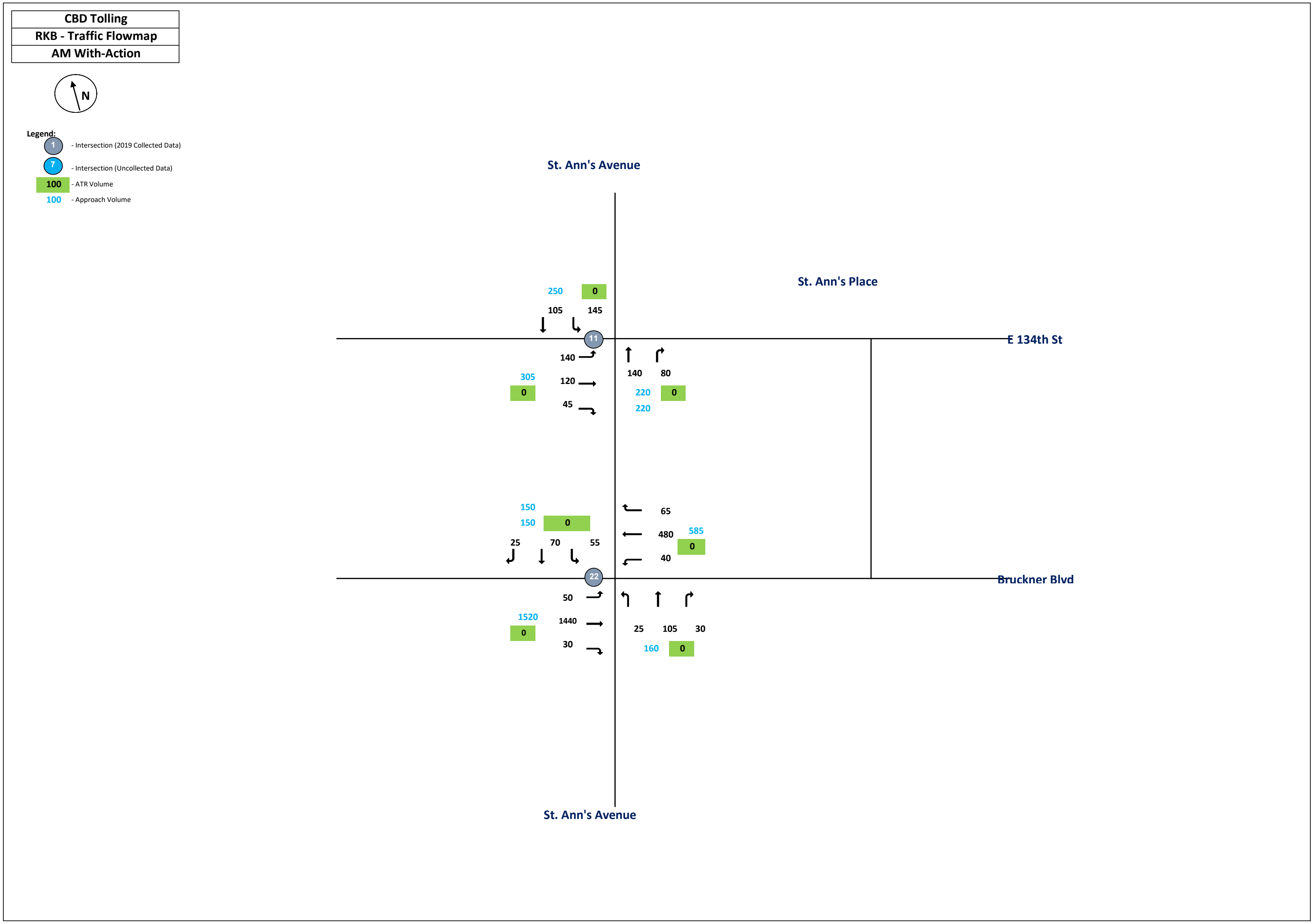
Intersection	Node	Approach	Total Vehicles Inbound/Outbound AM Peak Hour L2	L	T	R	R2	Total
E 134th Street and St. Ann's Ave								
2019 (TMC-060)	**11**							
E 134th Street	11	EB	0	140	120	45	0	
E 134th Street	11	WB	0	0	0	0	0	
St. Ann's Ave	11	NB	0	0	140	80	0	
St. Ann's Ave	11	SB	0	145	105	0	0	**775**
Bruckner Blvd and St. Ann's Ave								
2019 (TMC-061)	**22**							
Bruckner Blvd	22	EB	0	50	1440	30	0	
Bruckner Blvd	22	WB	0	40	480	65	0	
St. Ann's Ave	22	NB	0	25	105	30	0	
St. Ann's Ave	22	SB	0	55	70	25	0	**2415**

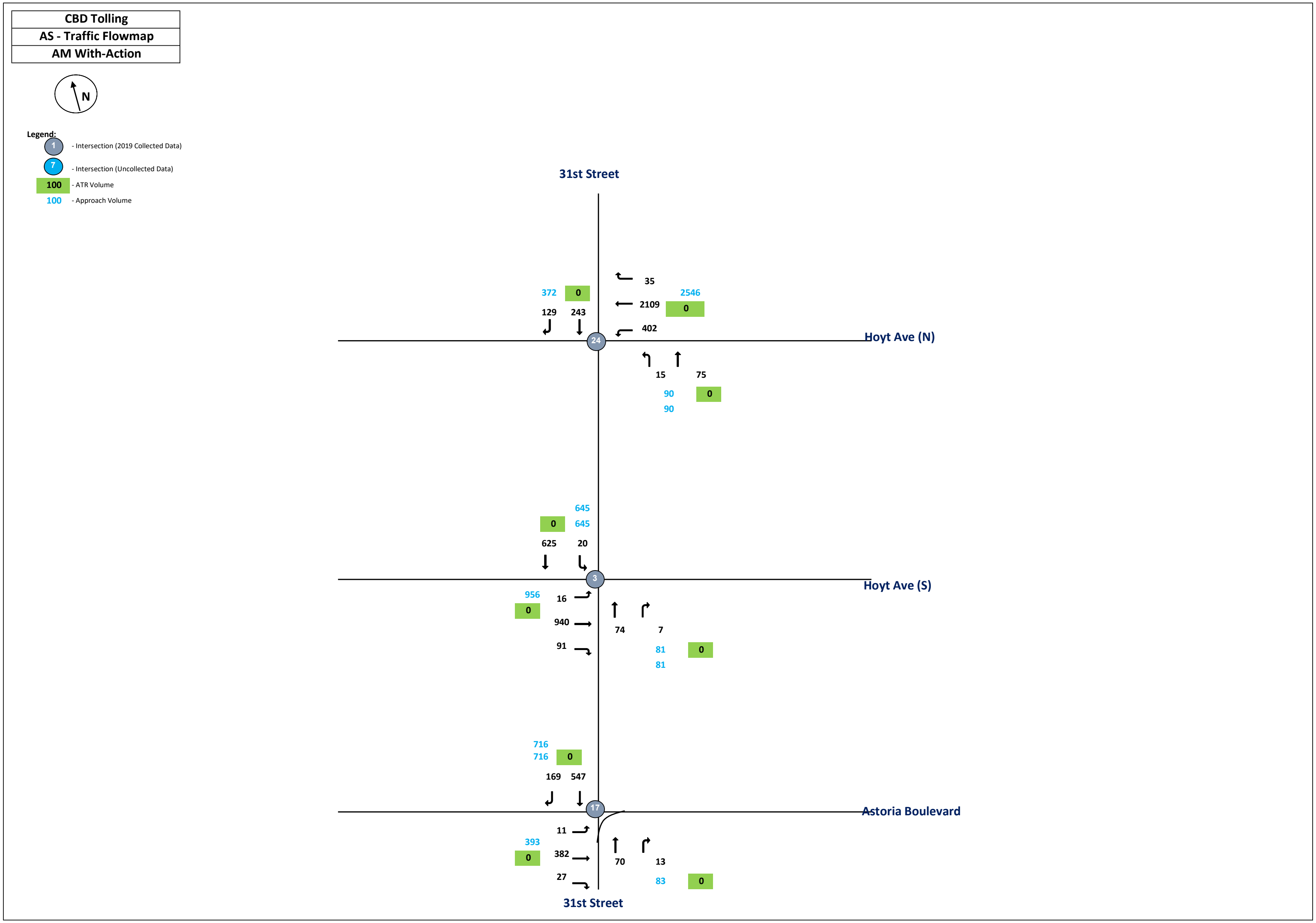
RFK-Q 8:00 AM

Intersection	Node	Approach	Total Vehicles Inbound/Outbound AM Peak Hour L2	L	T	R	R2	Total
31st Street and Astoria Blvd								
2019 (TMC-062)	**17**							
Astoria Blvd	17	EB	0	11	382	27	0	
Astoria Blvd	17	WB	0	0	0	0	0	
31st Street	17	NB	0	0	70	13	0	
31st Street	17	SB	0	0	547	169	0	**1219**
31st Street and Hoyt Ave N								
2019 (TMC-063)	**24**							
Hoyt Ave N	24	EB	0	0	0	0	0	
Hoyt Ave N	24	WB	0	402	2109	35	0	
31st Street	24	NB	0	15	75	0	0	
31st Street	24	SB	0	0	243	129	0	**3008**
31st Street and Hoyt Ave S								
2019 (TMC-064)	**3**							
Hoyt Ave S	3	EB	0	16	940	91	0	
	3		0	0	0	0	0	
31st Street	3	NB	0	0	74	7	0	
31st Street	3	SB	0	20	625	0	0	**1773**

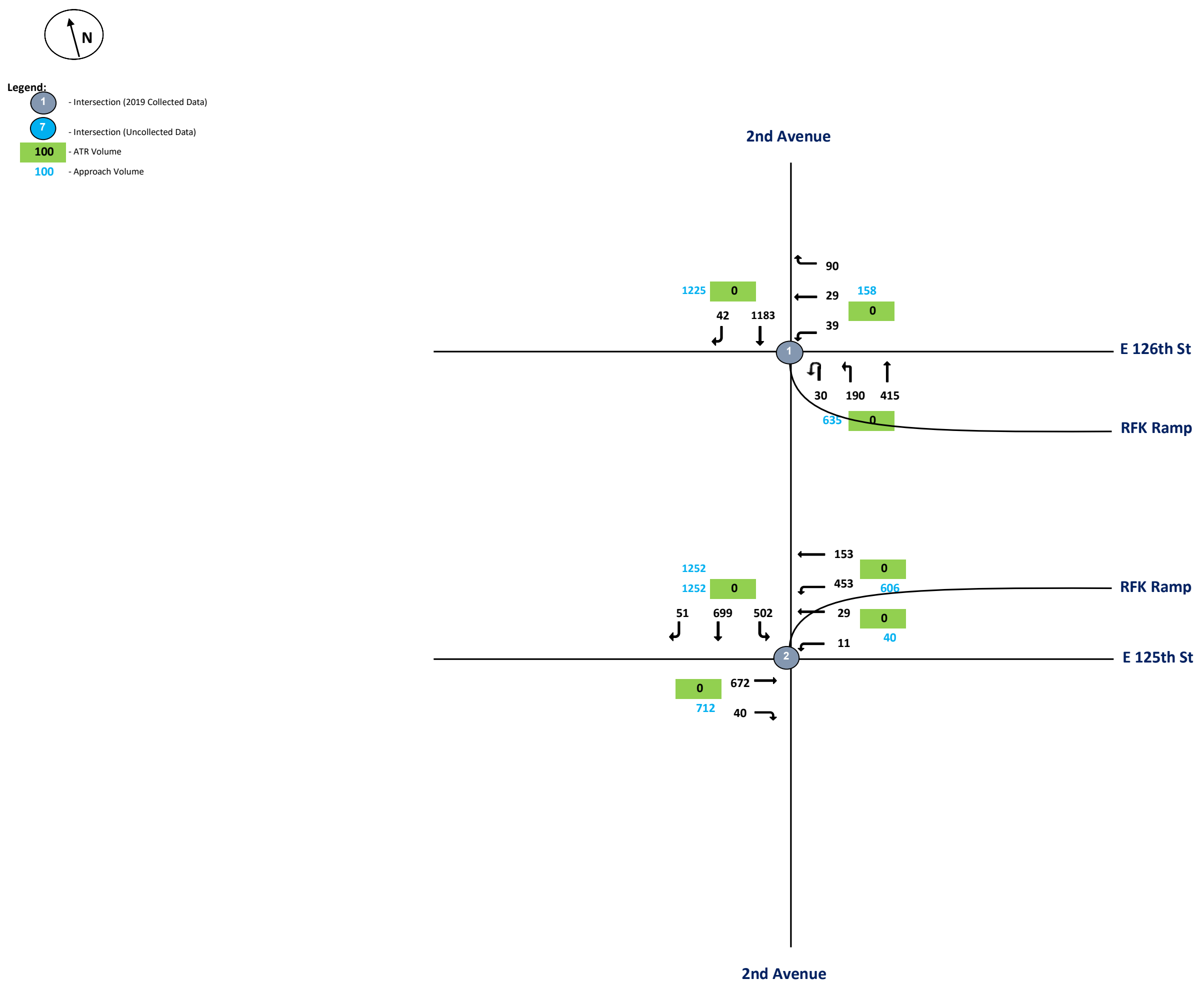
RFK-M 8:00 AM

Intersection	Node	Approach	Total Vehicles Inbound/Outbound AM Peak Hour					
			L2	L	T	R	R2	Total
E 126th Street and 2nd Ave								
2019 (TMC-058)								
RFK Ramp	**1**	NW	30	190	0	415	0	
E 126th Street	1	EB	0	0	0	0	0	
E 126th Street	1	WB	0	39	29	90	0	
2nd Ave	1	NB	0	0	0	0	0	
2nd Ave	1	SB	0	0	1183	42	0	**1383**
E 125th Street and 2nd Ave								
2019 (TMC-059)	**2**							
E 125th Street	2	EB	0	0	672	40	0	
E 125th Street	2	WB	0	11	29	0	0	
2nd Ave	2	SW	0	453	0	153	0	
2nd Ave	2	SB	0	502	699	51	0	**2610**


CBD Tolling
RKB - Traffic Flowmap
AM With-Action
N
Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume
St. Ann's Avenue
St. Ann's Place
E 134th St
Bruckner Blvd
St. Ann's Avenue
11
22
250
0
105
145
140
120
45
305
0
140
80
220
0
220
150
150
0
25
70
55
65
480
40
585
0
50
1440
30
1520
0
25
105
30
160
0


CBD Tolling
AS - Traffic Flowmap
AM With-Action
N
Legend:
- Intersection (2019 Collected Data)
- Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume
31st Street
Hoyt Ave (N)
Hoyt Ave (S)
Astoria Boulevard
31st Street
372
0
129
243
35
2109
402
2546
0
24
15
75
90
0
90
645
0
645
625
20
3
956
0
16
940
91
74
7
81
0
81
716
716
0
169
547
17
11
393
0
382
27
70
13
83
0

CBD Tolling
RKM - Traffic Flowmap
AM With-Action



RFK-B 5:00 PM

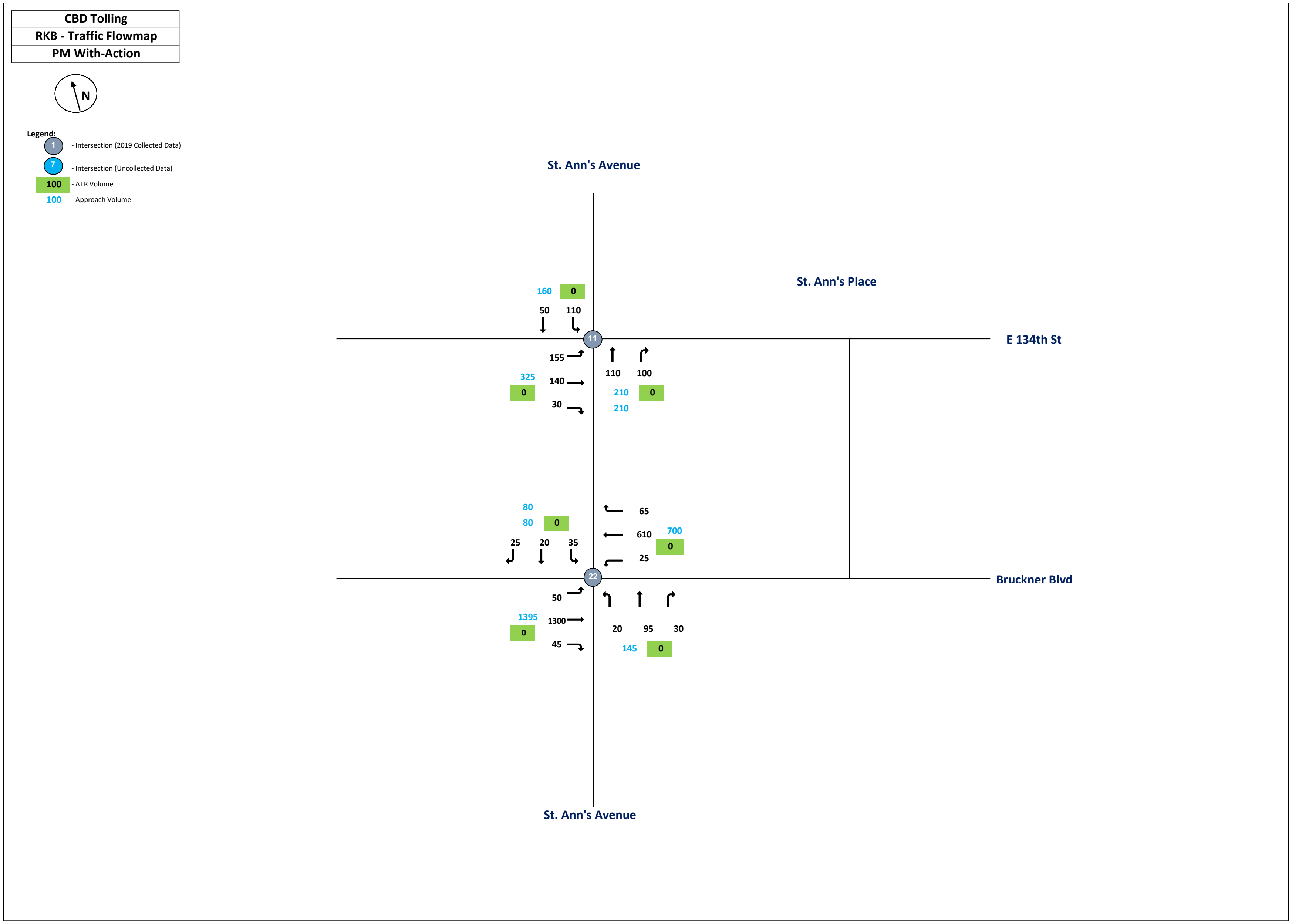
Intersection	Node	Approach	Total Vehicles					
			Inbound/Outbound					
			PM Peak Hour					
			L2	L	T	R	R2	Total
E 134th Street and St. Ann's Ave								
2019 (TMC-060)	**11**							
E 134th Street	11	EB	0	155	140	30	0	
E 134th Street	11	WB	0	0	0	0	0	
St. Ann's Ave	11	NB	0	0	110	100	0	
St. Ann's Ave	11	SB	0	110	50	0	0	**695**
Bruckner Blvd and St. Ann's Ave								
2019 (TMC-061)	**22**							
Bruckner Blvd	22	EB	0	50	1300	45	0	
Bruckner Blvd	22	WB	0	25	610	65	0	
St. Ann's Ave	22	NB	0	20	95	30	0	
St. Ann's Ave	22	SB	0	35	20	25	0	**2320**

RFK-Q 5:00 PM

Intersection	Node	Approach	L2	L	T	R	R2	Total
			Total Vehicles Inbound/Outbound PM Peak Hour					
31st Street and Astoria Blvd								
2019 (TMC-062)	**17**							
Astoria Blvd	17	EB	0	17	402	50	0	
Astoria Blvd	17	WB	0	0	0	0	0	
31st Street	17	NB	0	0	48	7	0	
31st Street	17	SB	0	0	433	198	0	**1155**
31st Street and Hoyt Ave N								
2019 (TMC-063)	**24**							
Hoyt Ave N	24	EB	0	0	0	0	0	
Hoyt Ave N	24	WB	0	514	1445	35	0	
31st Street	24	NB	0	21	49	0	0	
31st Street	24	SB	0	0	56	66	0	**2186**
31st Street and Hoyt Ave S								
2019 (TMC-064)	**3**							
Hoyt Ave S	3	EB	0	11	1111	81	0	
	3		0	0	0	0	0	
31st Street	3	NB	0	0	59	6	0	
31st Street	3	SB	0	20	550	0	0	**1838**

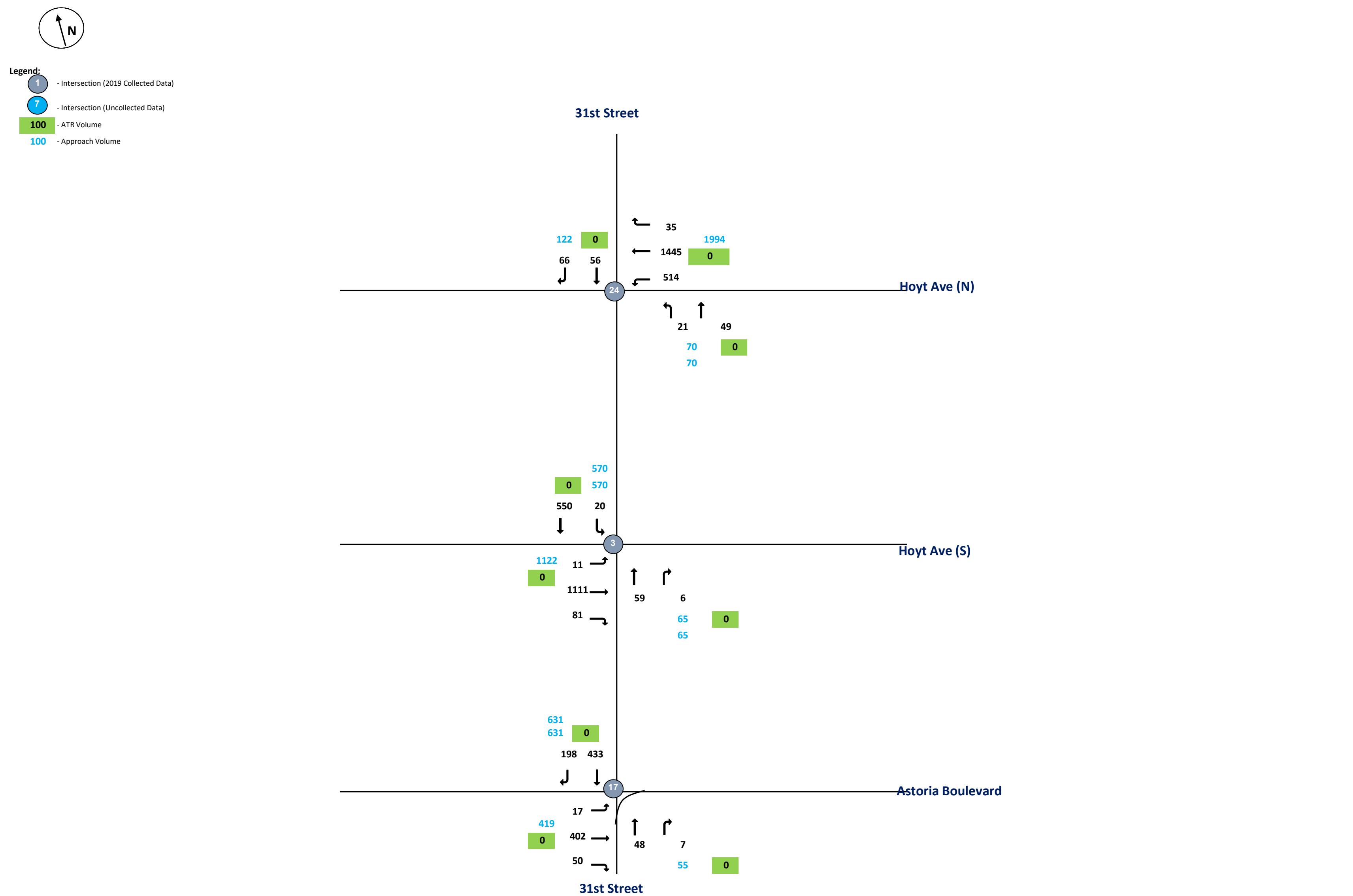
RFK-M 5:00 PM

Intersection	Node	Approach	Total Vehicles Inbound/Outbound PM Peak Hour L2	L	T	R	R2	Total
E 126th Street and 2nd Ave								
2019 (TMC-058)								
RFK Ramp	**1**	NW	25	180	0	765	0	
E 126th Street	1	EB	0	0	0	0	0	
E 126th Street	1	WB	0	42	22	44	0	
2nd Ave	1	NB	0	0	0	0	0	
2nd Ave	1	SB	0	0	1332	31	0	**1471**
E 125th Street and 2nd Ave								
2019 (TMC-059)	**2**							
E 125th Street	2	EB	0	0	731	20	0	
E 125th Street	2	WB	0	26	83	0	0	
2nd Ave	2	SW	0	583	0	218	0	
2nd Ave	2	SB	0	633	715	51	0	**3060**



DRAFT, PRIVILEGED, AND CONFIDENTIAL

CBD Tolling
AS - Traffic Flowmap
PM With-Action



DRAFT, PRIVILEGED, AND CONFIDENTIAL

RKM **5:00 PM**

Intersection	Node	Approach	L2	L	T	R	R2	Total
			Total Vehicles Inbound/Outbound PM Peak Hour					
E 126th Street and 2nd Ave								
2019 (TMC-058)								
RFK Ramp	**1**	NW	25	180	0	765	0	
E 126th Street	1	EB	0	0	0	0	0	
E 126th Street	1	WB	0	42	22	44	0	
2nd Ave	1	NB	0	0	0	0	0	
2nd Ave	1	SB	0	0	1332	31	0	**1471**
E 125th Street and 2nd Ave								
2019 (TMC-059)	**2**							
E 125th Street	2	EB	0	0	731	20	0	
E 125th Street	2	WB	0	26	83	0	0	
2nd Ave	2	SW	0	583	0	218	0	
2nd Ave	2	SB	0	633	715	51	0	**3060**

RFK-B 9:00 PM

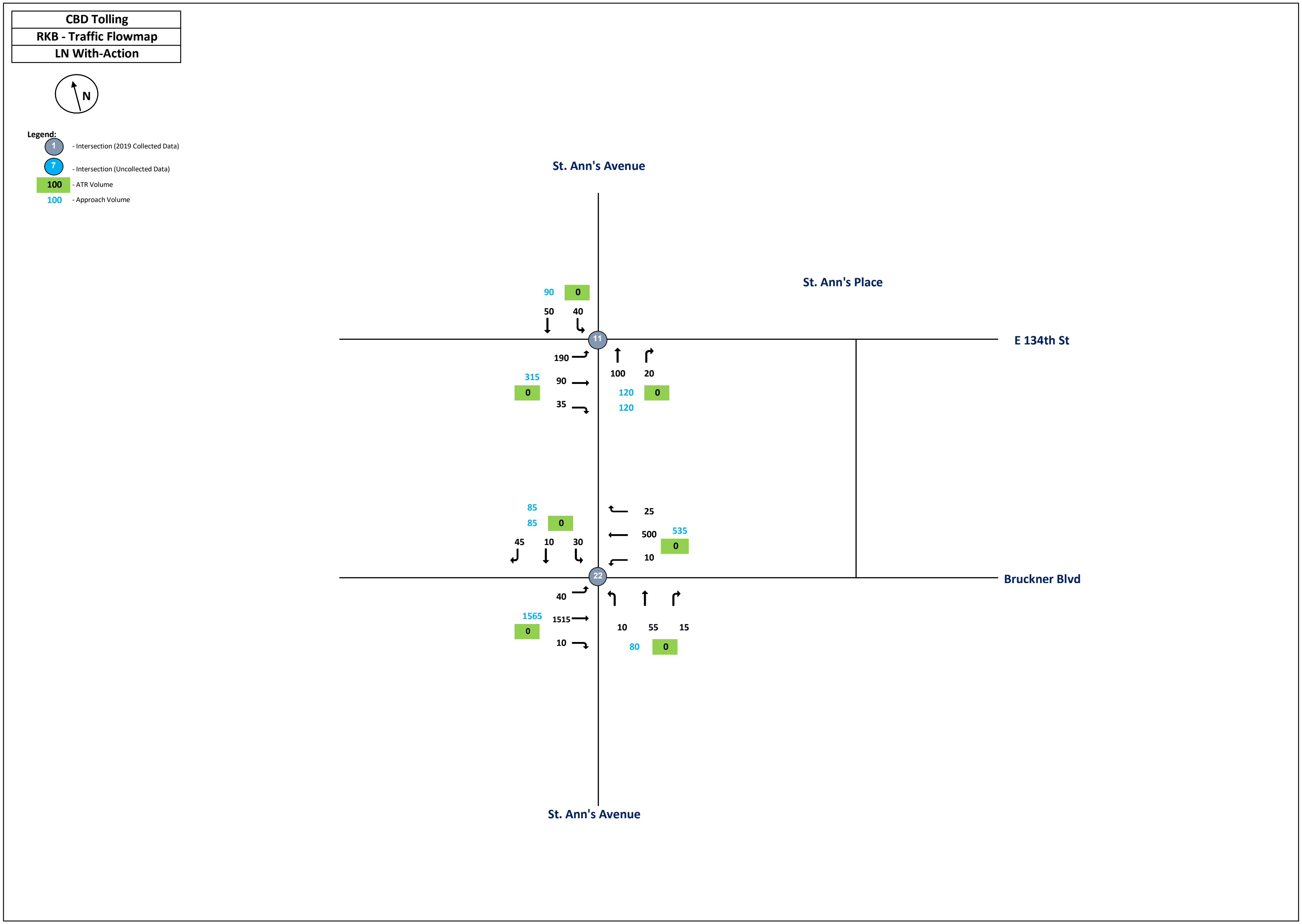
Intersection	Node	Approach	Total Vehicles Inbound/Outbound LN Peak Hour L2	L	T	R	R2	Total
E 134th Street and St. Ann's Ave								
2019 (TMC-060)	**11**							
E 134th Street	11	EB	0	190	90	35	0	
E 134th Street	11	WB	0	0	0	0	0	
St. Ann's Ave	11	NB	0	0	100	20	0	
St. Ann's Ave	11	SB	0	40	50	0	0	**525**
Bruckner Blvd and St. Ann's Ave								
2019 (TMC-061)	**22**							
Bruckner Blvd	22	EB	0	40	1515	10	0	
Bruckner Blvd	22	WB	0	10	500	25	0	
St. Ann's Ave	22	NB	0	10	55	15	0	
St. Ann's Ave	22	SB	0	30	10	45	0	**2265**

RFK-Q 9:00 PM

Intersection	Node	Approach	L2	L	T	R	R2	Total
			Total Vehicles Inbound/Outbound LN Peak Hour					
31st Street and Astoria Blvd								
2019 (TMC-062)	**17**							
Astoria Blvd	17	EB	0	10	322	17	0	
Astoria Blvd	17	WB	0	0	0	0	0	
31st Street	17	NB	0	0	24	6	0	
31st Street	17	SB	0	0	306	147	0	**832**
31st Street and Hoyt Ave N								
2019 (TMC-063)	**24**							
Hoyt Ave N	24	EB	0	0	0	0	0	
Hoyt Ave N	24	WB	0	444	1065	20	0	
31st Street	24	NB	0	11	24	0	0	
31st Street	24	SB	0	0	167	38	0	**1769**
31st Street and Hoyt Ave S								
2019 (TMC-064)	**3**							
Hoyt Ave S	3	EB	0	6	864	46	0	
	3		0	0	0	0	0	
31st Street	3	NB	0	0	29	5	0	
31st Street	3	SB	0	204	407	0	0	**1561**

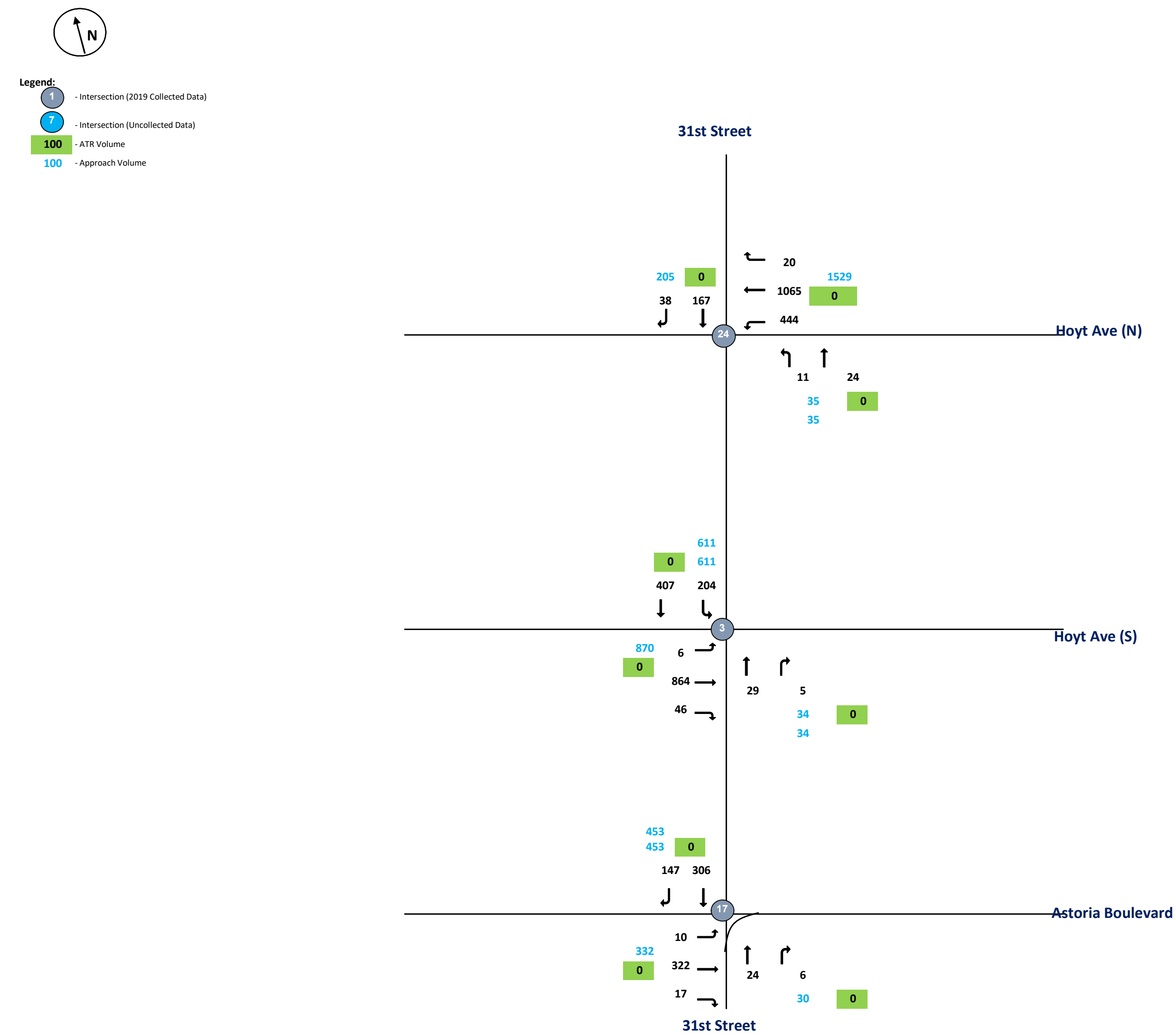
RFK-M 9:00 PM

Intersection	Node	Approach	Total Vehicles Inbound/Outbound LN Peak Hour					
			L2	L	T	R	R2	Total
E 126th Street and 2nd Ave								
2019 (TMC-058)								
RFK Ramp	**1**	NW	5	75	0	535	0	
E 126th Street	1	EB	0	0	0	0	0	
E 126th Street	1	WB	0	20	33	57	0	
2nd Ave	1	NB	0	0	0	0	0	
2nd Ave	1	SB	0	0	540	17	0	**667**
E 125th Street and 2nd Ave								
2019 (TMC-059)	**2**							
E 125th Street	2	EB	0	0	682	50	0	
E 125th Street	2	WB	0	8	37	0	0	
2nd Ave	2	SW	0	187	0	164	0	
2nd Ave	2	SB	0	124	424	17	0	**1693**

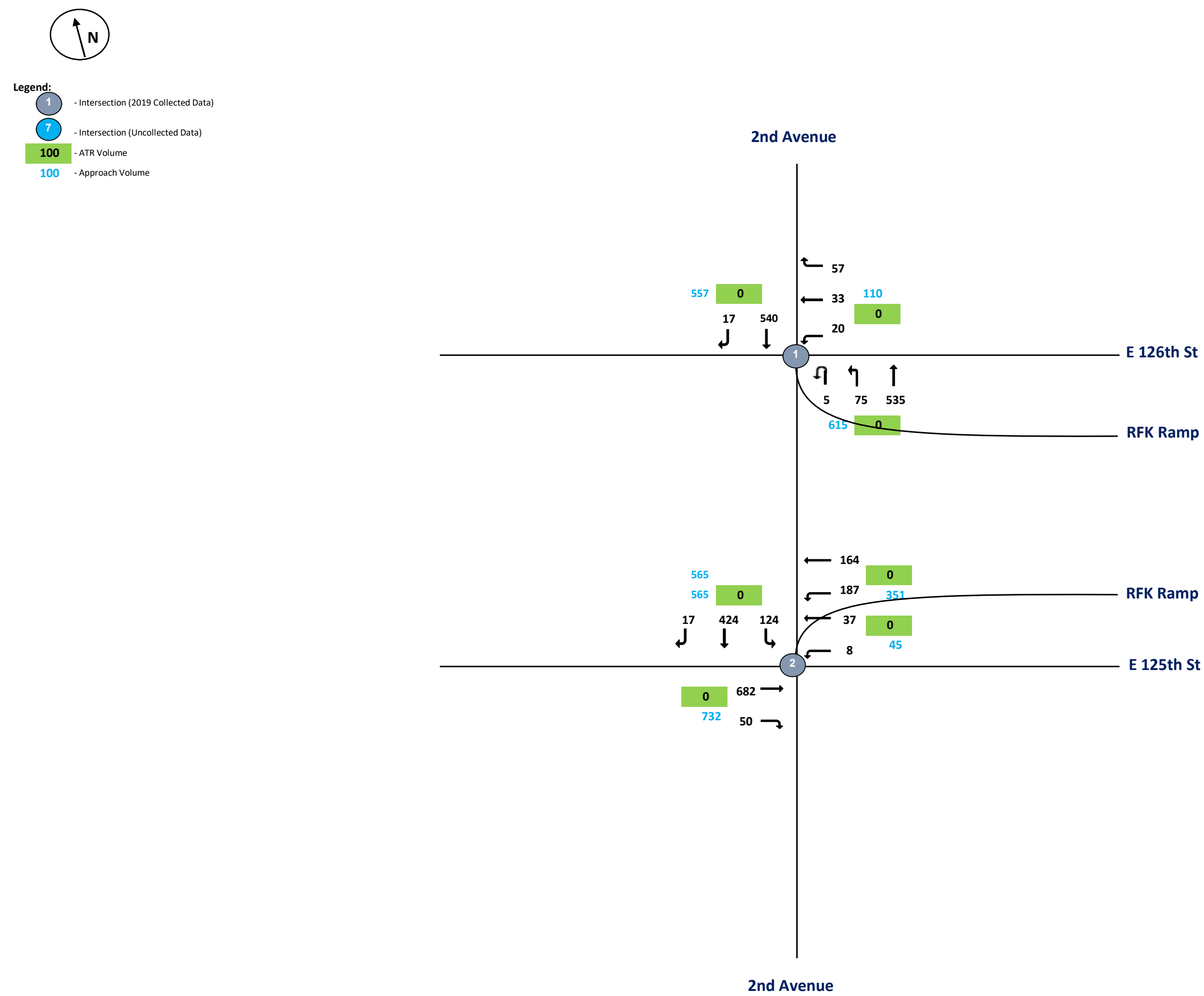


DRAFT, PRIVILEGED, AND CONFIDENTIAL

CBD Tolling
AS - Traffic Flowmap
LN With-Action



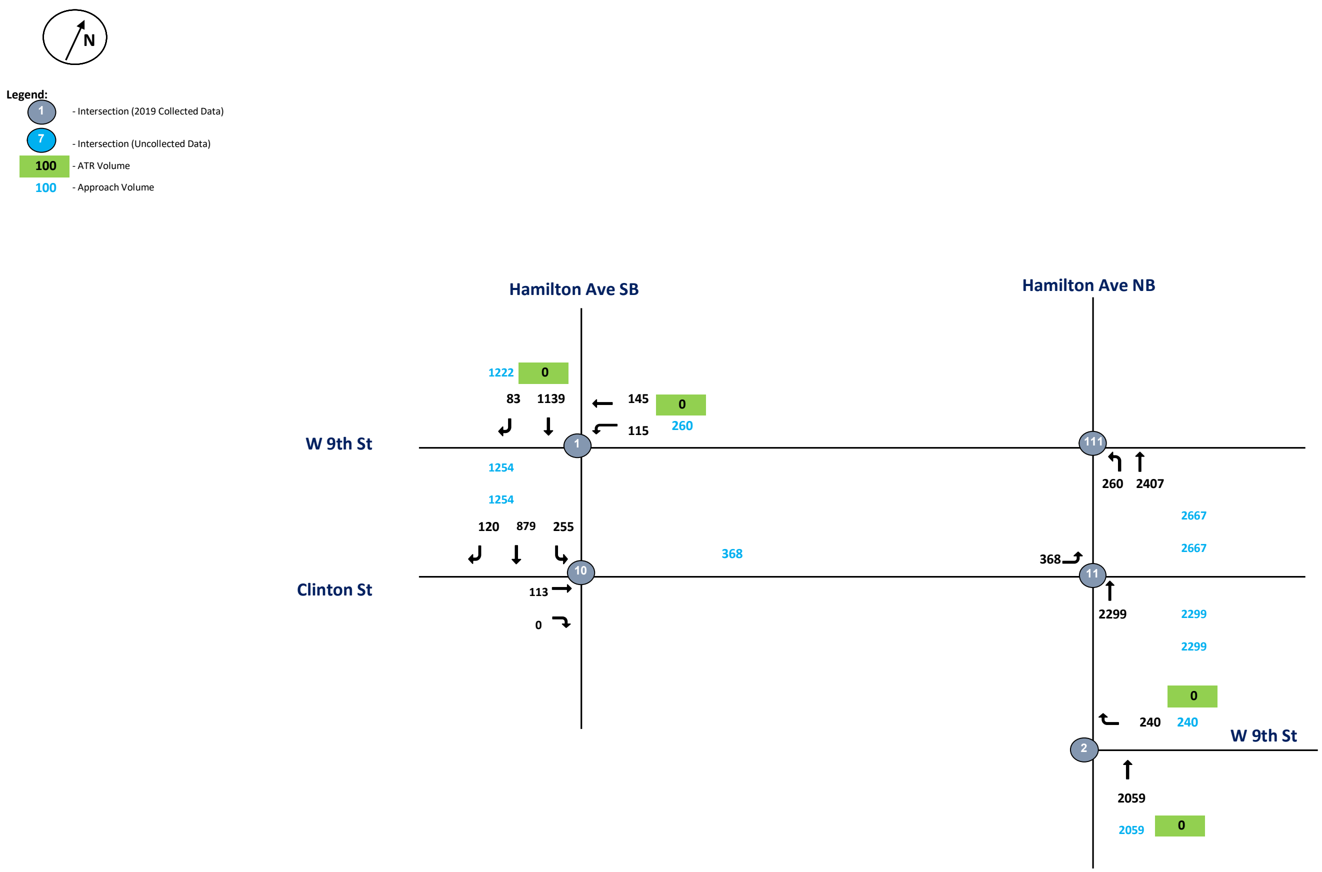
CBD Tolling
RKM - Traffic Flowmap
LN With-Action



RH 8:00:00 AM

Intersection	Node	Approach	L2	L	T	R	R2	Total
			Total Vehicles					
			Inbound/Outbound					
			AM Peak Hour					
Hamilton Ave SB & W 9th St								
2019 (TMC-040)	**1**							
W 9th St	1	EB	0	0	0	0	0	
W 9th St	1	WB	0	115	145	0	0	
Hamilton Ave SB	1		0	0	0	0	0	
Hamilton Ave SB	1	SB	0	0	1139	83	0	**1482**
Hamilton Ave SB & W 9th St								
2019 (TMC-040)	**10**							
Clinton Avenue	10	EB	0	0	113	0	0	
Clinton Avenue	10	WB	0	0	0	0	0	
Hamilton Ave SB	10		0	0	0	0	0	
Hamilton Ave SB	10	SB	0	255	879	120	0	**1367**
Hamilton Ave SB & W 9th St								
2019 (TMC-040)	**11**							
Clinton Avenue	11	EB	0	368	0	0	0	
Clinton Avenue	11		0	0	0	0	0	
Hamilton Ave	11	NB	0	0	2299	0	0	
Hamilton Ave	11		0	0	0	0	0	**2667**
Hamilton Ave SB & W 9th St								
2019 (TMC-040)	**111**							
W 9th St	111	EB	0	0	0	0	0	
W 9th St	111	WB	0	0	0	0	0	
Hamilton Ave	111	NB	0	260	2407	0	0	
-	111	SB	0	0	0	0	0	**2667**
Hamilton Ave NB & W 9th St								
2019 (TMC-041)	**2**							
W 9th St	2	EB	0	0	0	0	0	
W 9th St	2	WB	0	0	0	240	0	
Hamilton Ave	2	NB	0	0	2059	0	0	
Hamilton Ave	2	SB	0	0	0	0	0	**2299**

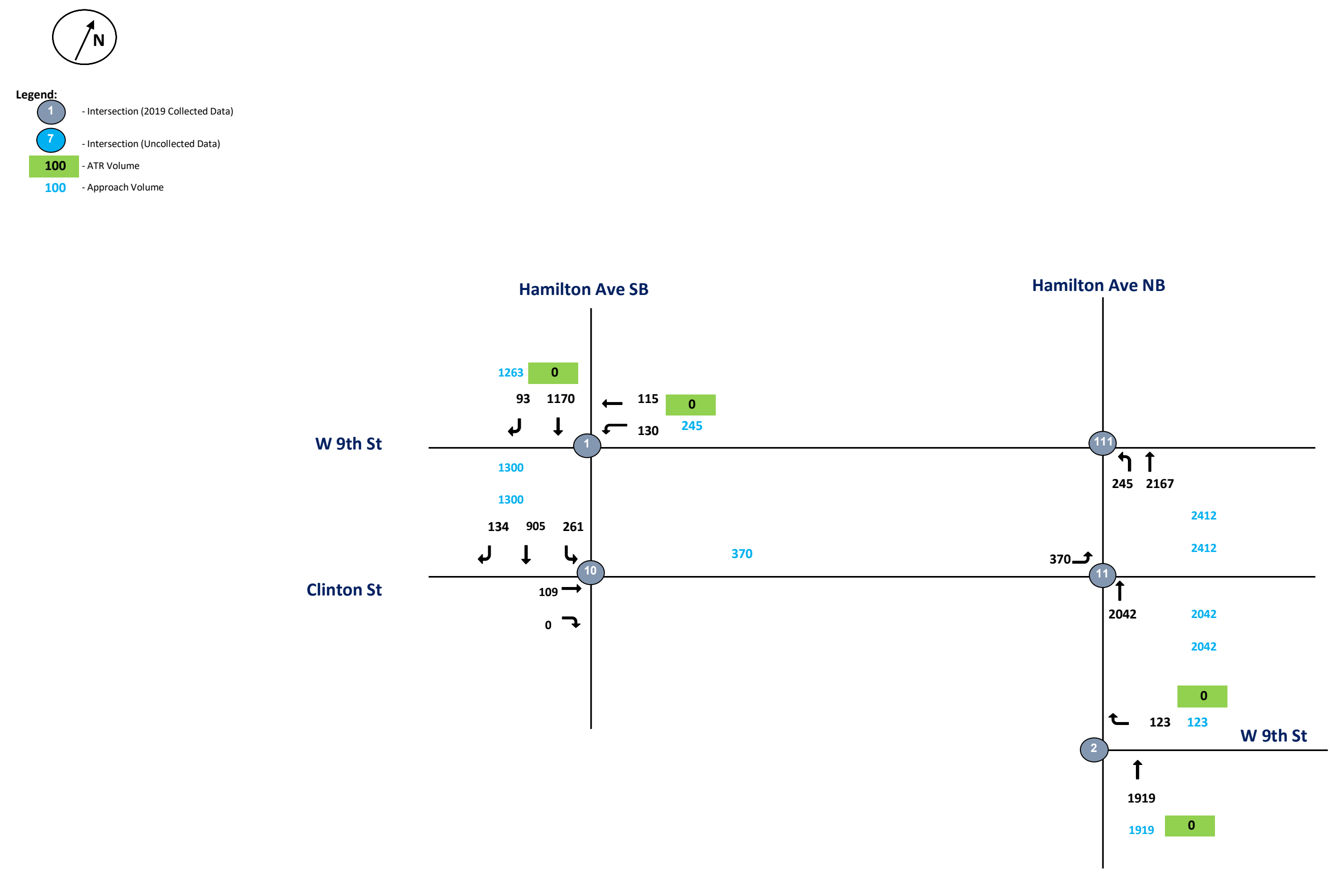
CBD Tolling
Red Hook- Traffic Flowmap
AM With-Action



RH 1:00:00 PM

Intersection	Node	Approach	L2	L	T	R	R2	Total
			Total Vehicles					
			Inbound/Outbound					
			MD Peak Hour					
Hamilton Ave SB & W 9th St								
2019 (TMC-040)	**1**							
W 9th St	1	EB	0	0	0	0	0	
W 9th St	1	WB	0	130	115	0	0	
Hamilton Ave SB	1		0	0	0	0	0	
Hamilton Ave SB	1	SB	0	0	1170	93	0	**1508**
Hamilton Ave SB & W 9th St								
2019 (TMC-040)	**10**							
Clinton Avenue	10	EB	0	0	109	0	0	
Clinton Avenue	10	WB	0	0	0	0	0	
Hamilton Ave SB	10		0	0	0	0	0	
Hamilton Ave SB	10	SB	0	261	905	134	0	**1409**
Hamilton Ave SB & W 9th St								
2019 (TMC-040)	**11**							
Clinton Avenue	11	EB	0	370	0	0	0	
Clinton Avenue	11		0	0	0	0	0	
Hamilton Ave	11	NB	0	0	2042	0	0	
Hamilton Ave	11		0	0	0	0	0	**2412**
Hamilton Ave SB & W 9th St								
2019 (TMC-040)	**111**							
W 9th St	111	EB	0	0	0	0	0	
W 9th St	111	WB	0	0	0	0	0	
Hamilton Ave	111	NB	0	245	2167	0	0	
-	111	SB	0	0	0	0	0	**2412**
Hamilton Ave NB & W 9th St								
2019 (TMC-041)	**2**							
W 9th St	2	EB	0	0	0	0	0	
W 9th St	2	WB	0	0	0	123	0	
Hamilton Ave	2	NB	0	0	1919	0	0	
Hamilton Ave	2	SB	0	0	0	0	0	**2042**

CBD Tolling
Red Hook- Traffic Flowmap
MD With-Action

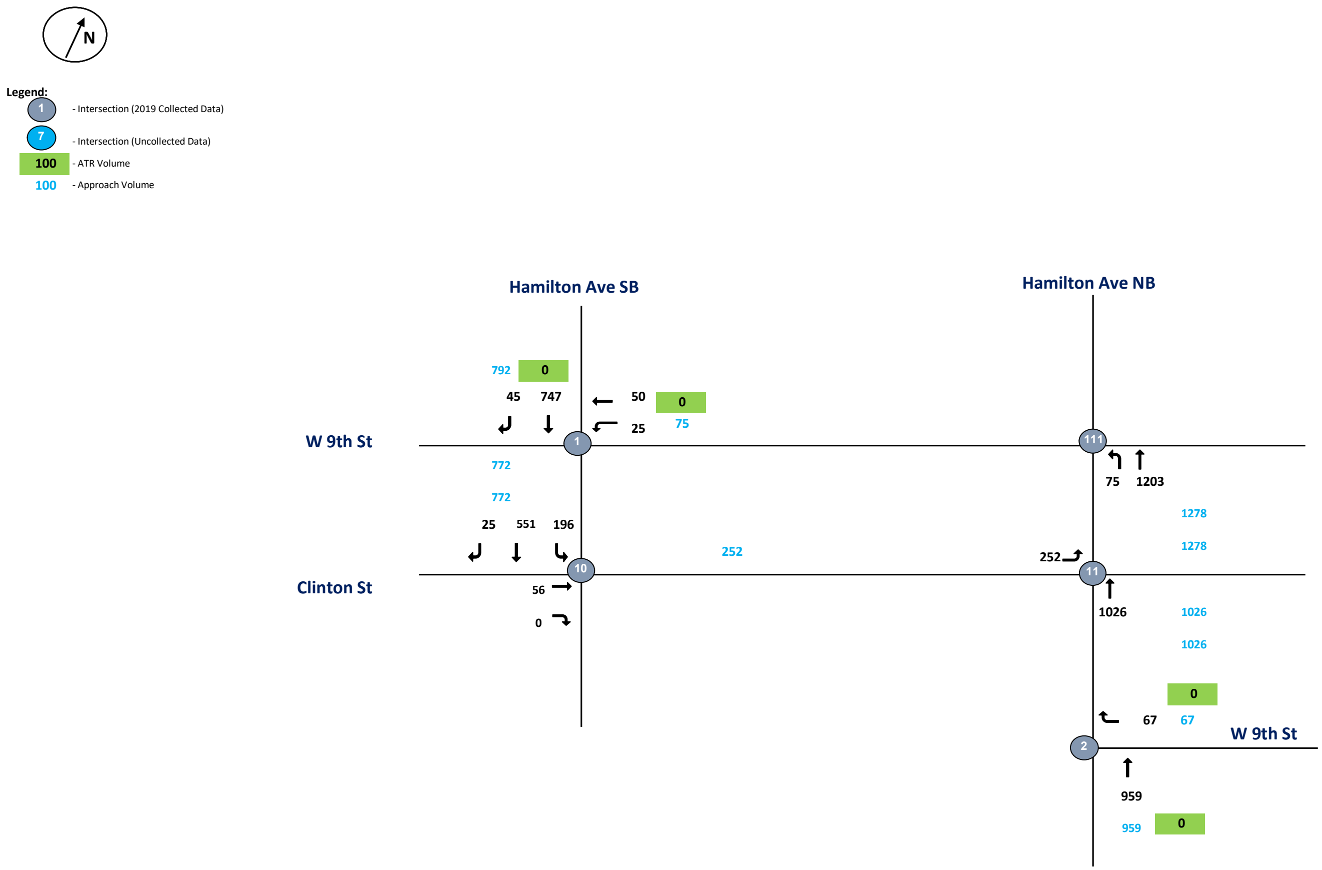


DRAFT, PRIVILEGED, AND CONFIDENTIAL

RH 9:00:00 PM

Intersection	Node	Approach	L2	L	T	R	R2	Total
			Total Vehicles Inbound/Outbound LN Peak Hour					
Hamilton Ave SB & W 9th St								
2019 (TMC-040)	**1**							
W 9th St	1	EB	0	0	0	0	0	
W 9th St	1	WB	0	25	50	0	0	
Hamilton Ave SB	1		0	0	0	0	0	
Hamilton Ave SB	1	SB	0	0	747	45	0	**867**
Hamilton Ave SB & W 9th St								
2019 (TMC-040)	**10**							
Clinton Avenue	10	EB	0	0	56	0	0	
Clinton Avenue	10	WB	0	0	0	0	0	
Hamilton Ave SB	10		0	0	0	0	0	
Hamilton Ave SB	10	SB	0	196	551	25	0	**828**
Hamilton Ave SB & W 9th St								
2019 (TMC-040)	**11**							
Clinton Avenue	11	EB	0	252	0	0	0	
Clinton Avenue	11		0	0	0	0	0	
Hamilton Ave	11	NB	0	0	1026	0	0	
Hamilton Ave	11		0	0	0	0	0	**1278**
Hamilton Ave SB & W 9th St								
2019 (TMC-040)	**111**							
W 9th St	111	EB	0	0	0	0	0	
W 9th St	111	WB	0	0	0	0	0	
Hamilton Ave	111	NB	0	75	1203	0	0	
-	111	SB	0	0	0	0	0	**1278**
Hamilton Ave NB & W 9th St								
2019 (TMC-041)	**2**							
W 9th St	2	EB	0	0	0	0	0	
W 9th St	2	WB	0	0	0	67	0	
Hamilton Ave	2	NB	0	0	959	0	0	
Hamilton Ave	2	SB	0	0	0	0	0	**1026**

CBD Tolling
Red Hook- Traffic Flowmap
LN With-Action



UES 9:00:00 PM

Intersection	Node	Approach	Total Vehicles Inbound/Outbound LN Peak Hour L2	L	T	R	R2	Total
60th Street & Queensboro Bridge Exit								
2019 (TMC-022)	**1**							
60th Street	1	EB	0	0	10	0	0	
60th Street	1	WB	0	0	0	0	0	
Queensboro Bridge Exit	1	NB	0	9	79	273	0	
	1	SB	0	0	0	0	0	371
60th Street & 3rd Ave								
2019 (TMC-023)	**2**							
	2	EB	0	0	0	0	0	
60th Street	2	WB	0	0	219	30	0	
3rd Ave	2	NB	0	70	932	0	0	
	2	SB	0	0	0	0	0	1251
60th St & York Ave								
2019 (TMC-024)	**3**							
60th St	3	EB	0	228	0	25	0	
60th St	3	WB	0	0	0	0	0	
York Ave	3	NB	0	0	475	0	0	
York Ave	3	SB	0	0	378	0	0	1106
59th St & 2nd Ave								
2019 (TMC-025)								
Queensboro Bridge Exit (SWB)	**4**							
59th St	4	EB	0	0	181	120	94	
	4	WB	0	0	0	0	0	
	4	NB	0	0	0	0	0	
2nd Ave	4	SB	227	6	741	0	0	1369
60th Street & 2nd Ave								
2019 (TMC-026)	5	WB(bridge)						
Queensboro Bridge Exit (NWB)	**5**	NW	160	150	0	0	0	
60th St	5	EB	0	0	0	0	0	
60th St	5	WB	0	5	5	0	0	
	5	NB	0	0	0	0	0	
2nd Ave	5	SB	14	0	809	94	0	927

UES 9:00:00 PM

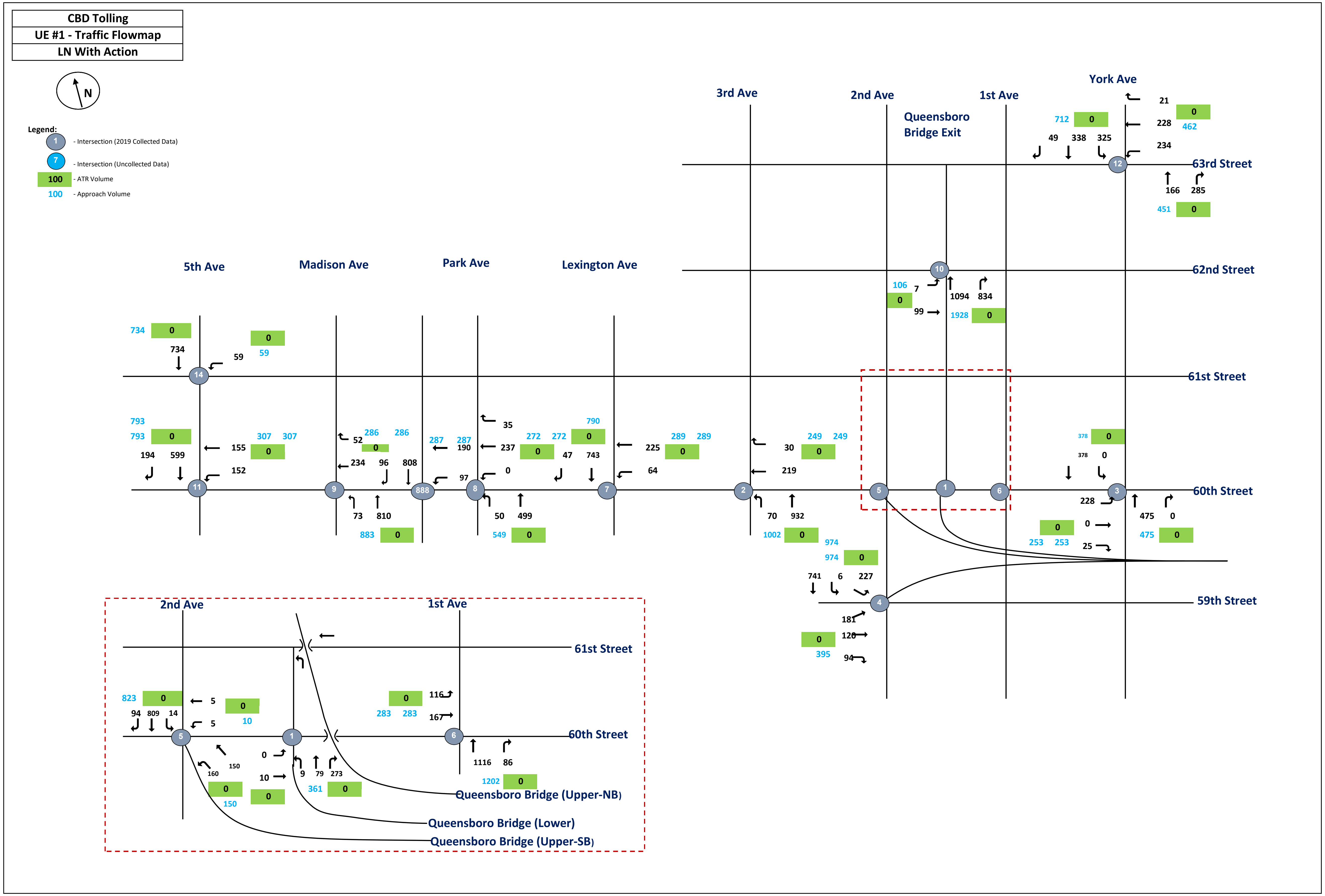
Intersection	Node	Approach	L2	L	T	R	R2	Total
			Total Vehicles					
			Inbound/Outbound					
			LN Peak Hour					
60th St & 1st Ave								
2019 (TMC-027)	**6**							
60th Ave	6	EB	0	116	167	0	0	
	6	WB	0	0	0	0	0	
1st Ave	6	NB	0	0	1116	86	0	
	6	SB	0	0	0	0	0	**1485**
60th St & Lexington Ave								
2019 (TMC-028)	**7**							
	7	EB	0	0	0	0	0	
60th St	7	WB	0	64	225	0	0	
	7	NB	0	0	0	0	0	
Lexington Ave	7	SB	0	0	743	47	0	**1079**
60th St & Park Ave								
2019 (TMC-029)	**8**							
	8	EB	0	0	0	0	0	
60th St	8	WB	0	0	237	35	0	
Park Ave	8	NB	0	50	499	0	0	
Park Ave	8	SB	0	0	0	0	0	**821**
60th St & Park Ave								
2019 (TMC-029)	**888**							
	888	EB	0	0	0	0	0	
60th St	888	WB	0	97	190	0	0	
Park Ave	888	NB	0	0	0	0	0	
Park Ave	888	SB	0	0	808	96	0	**1191**
60th St & Madison Ave								
2019 (TMC-030)	**9**							
	9	EB	0	0	0	0	0	
60th St	9	WB	0	0	234	52	0	
Madison Ave	9	NB	0	73	810	0	0	
	9	SB	0	0	0	0	0	**1169**

UES 9:00:00 PM

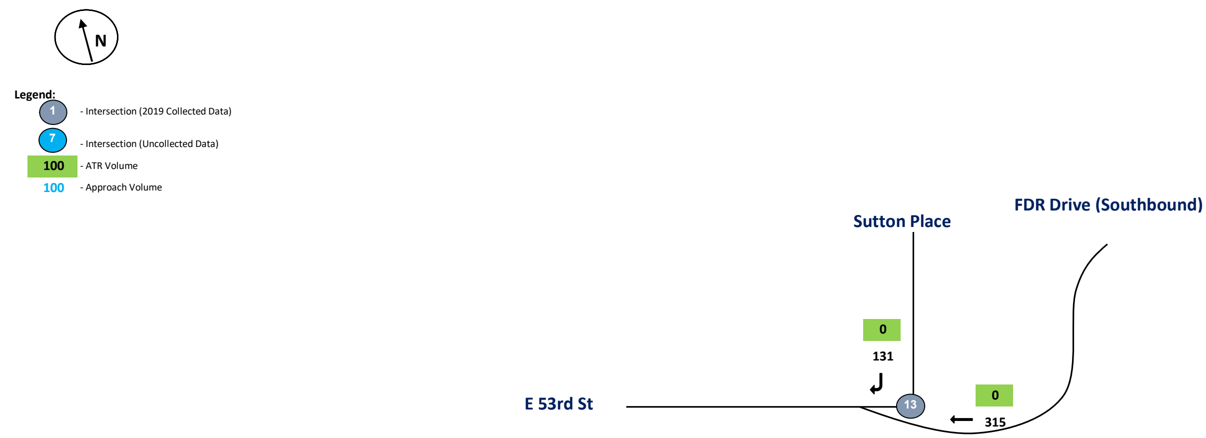
Intersection	Node	Approach	Total Vehicles Inbound/Outbound LN Peak Hour L2	L	T	R	R2	Total
62nd St & Queensboror Bridge Exit								
2019 (TMC-031)	**10**							
62nd St	10	EB	0	7	99	0	0	
	10	WB	0	0	0	0	0	
Queensboro Bridge Exit	10	NB	0	0	1094	834	0	
	10	SB	0	0	0	0	0	**2034**
60th St & 5th Ave								
2019 (TMC-032)	**11**							
	11	EB	0	0	0	0	0	
60th St	11	WB	0	152	155	0	0	
	11	NB	0	0	0	0	0	
5th Ave	11	SB	0	0	599	194	0	**1100**
63rd St & York Ave								
2019 (TMC-033)	**12**							
	12	EB	0	0	0	0	0	
63rd St	12	WB	0	234	228	21	0	
York Ave	12	NB	0	0	166	285	0	
York Ave	12	SB	0	325	338	49	0	**1646**
53rd St & FDR Drive								
2019 (TMC-034)	**13**							
	13	EB	0	0	0	0	0	
53rd St	13	SW	0	0	0	315	0	
	13	NB	0	0	0	0	0	
FDR Drive	13	SB	0	0	0	131	0	**446**
61st St & 5th Ave								
2019 (TMC-035)	**14**							
	14	EB	0	0	0	0	0	
61st St	14	WB	0	59	0	0	0	
	14	NB	0	0	0	0	0	
5th Ave	14	SB	0	0	734	0	0	**793**

UES 9:00:00 PM

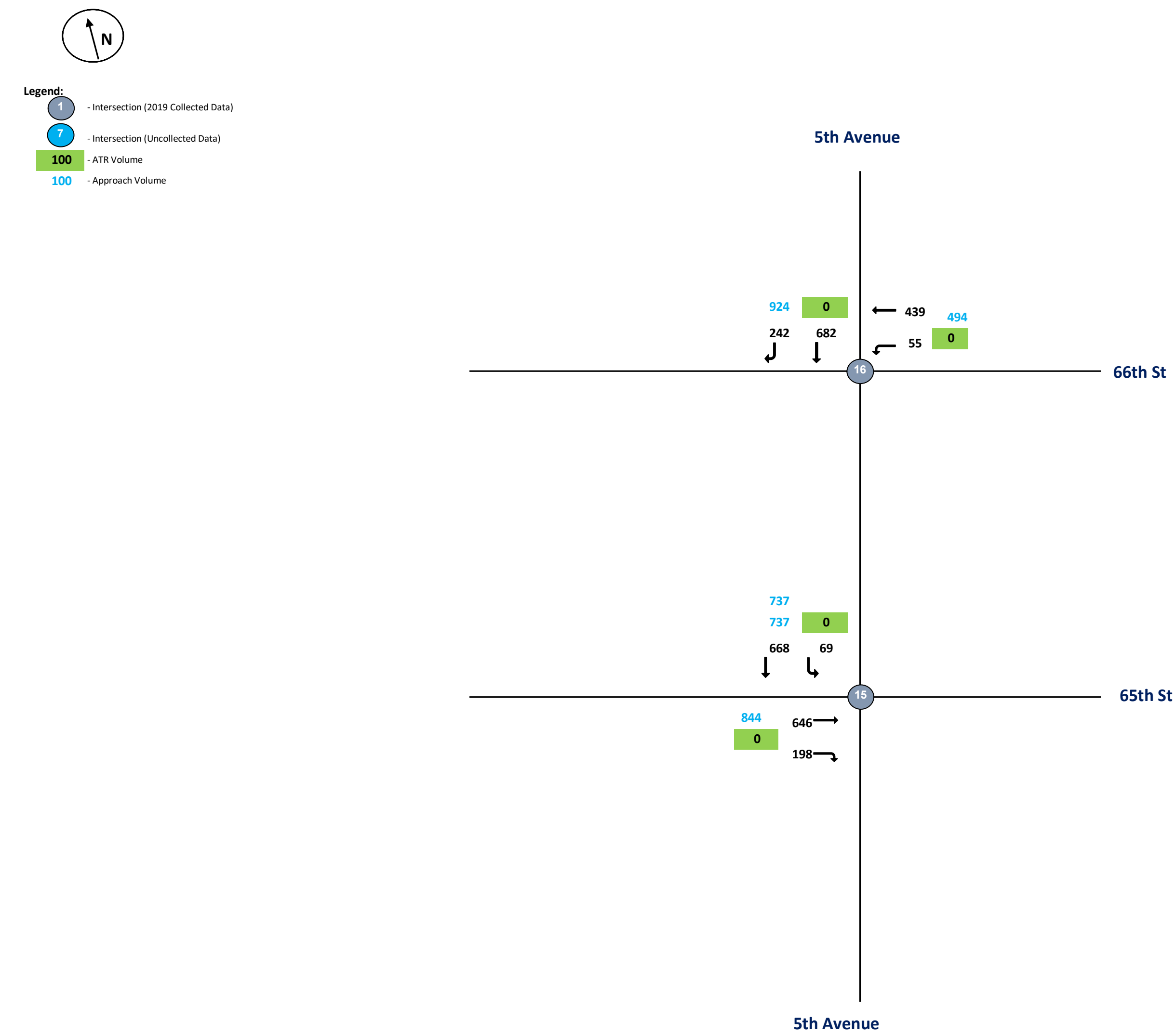
Intersection	Node	Approach	L2	L	T	R	R2	Total
			Total Vehicles					
			Inbound/Outbound					
			LN Peak Hour					
65th St & 5th Ave								
2019 (TMC-036)	**15**							
65th St	15	EB	0	0	646	198	0	
	15	WB	0	0	0	0	0	
	15	NB	0	0	0	0	0	
5th Ave	15	SB	0	69	668	0	0	**1581**
66th St & 5th Ave								
2019 (TMC-037)	**16**							
	16	EB	0	0	0	0	0	
66th St	16	WB	0	55	439	0	0	
	16	NB	0	0	0	0	0	
5th Ave	16	SB	0	0	682	242	0	**1418**
79th St & 5th Ave								
2019 (TMC-038)	**17**							
79th St	17	EB	0	0	336	105	0	
79th St	17	WB	0	50	353	0	0	
	17	NB	0	0	0	0	0	
5th Ave	17	SB	0	56	576	64	0	**1540**
71st St & York Ave								
2019 (TMC-039)	**18**							
	18	EB	0	0	0	0	0	
71st St	18	WB	0	76	176	76	0	
York Ave	18	NB	0	9	151	0	0	
York Ave	18	SB	0	0	224	31	0	**743**

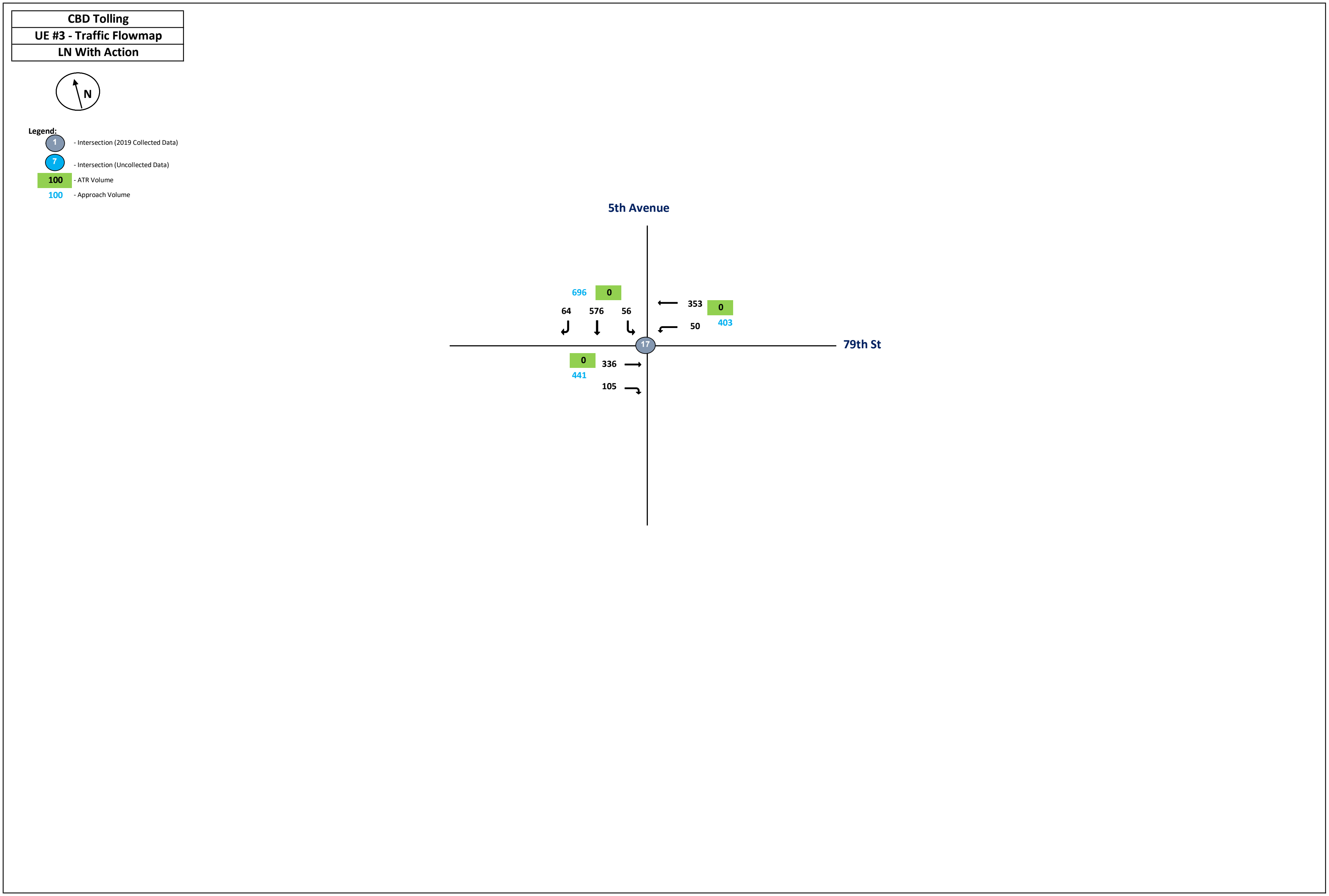

CBD Tolling
UE #1 - Traffic Flowmap
LN With Action
N
Legend:
- Intersection (2019 Collected Data)
- Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume
5th Ave
Madison Ave
Park Ave
Lexington Ave
3rd Ave
2nd Ave
1st Ave
York Ave
Queensboro Bridge Exit
63rd Street
62nd Street
61st Street
60th Street
59th Street
Queensboro Bridge (Upper-NB)
Queensboro Bridge (Lower)
Queensboro Bridge (Upper-SB)

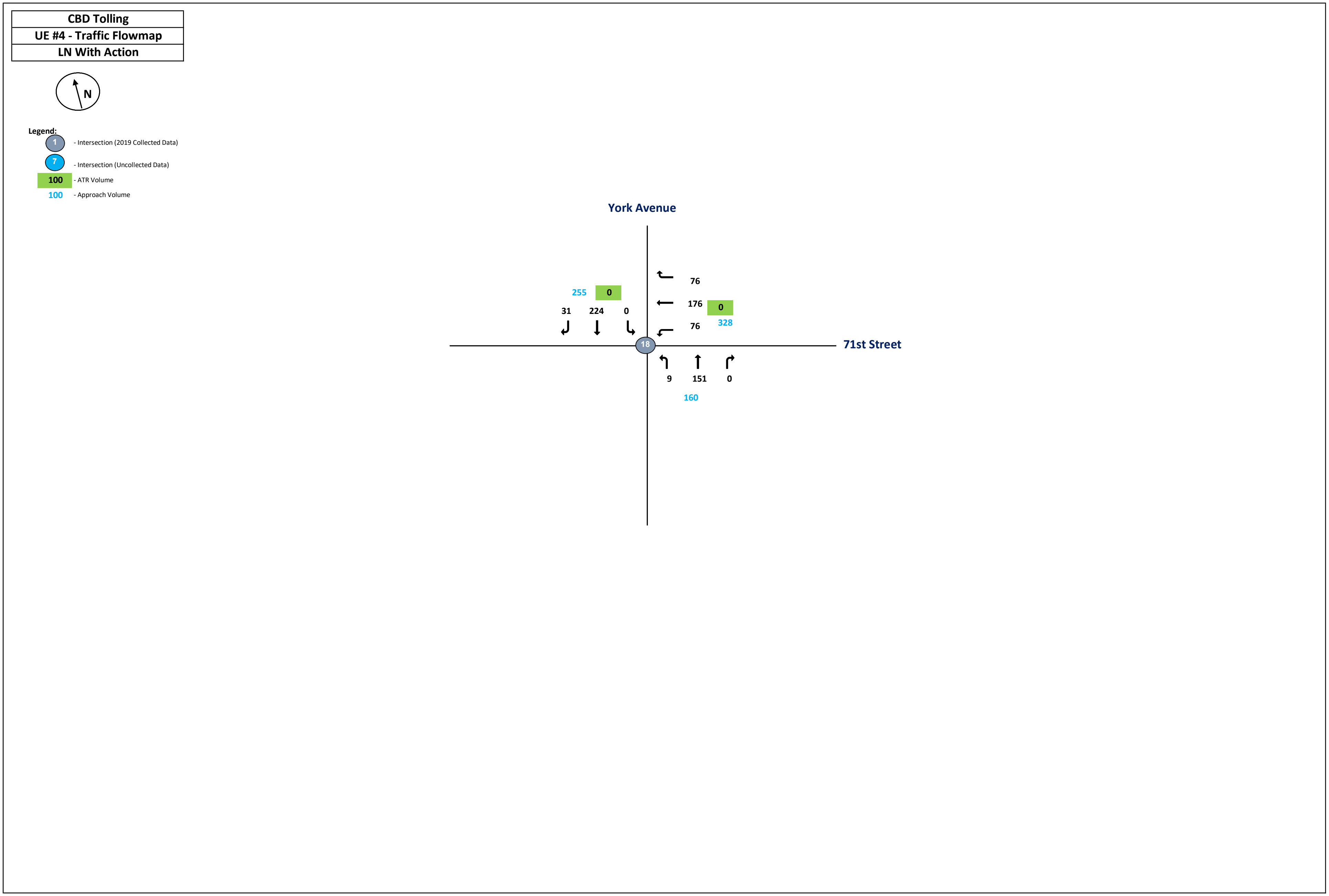
CBD Tolling
UE #2 - Traffic Flowmap
LN With Action



CBD Tolling
UE #3 - Traffic Flowmap
LN With Action




CBD Tolling
UE #3 - Traffic Flowmap
LN With Action
N
Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume
5th Avenue
79th St
17
696
0
64
576
56
353
0
50
403
0
441
336
105


CBD Tolling
UE #4 - Traffic Flowmap
LN With Action
N
Legend:
1 - Intersection (2019 Collected Data)
7 - Intersection (Uncollected Data)
100 - ATR Volume
100 - Approach Volume
York Avenue
71st Street
18
255
0
31
224
0
76
176
76
0
328
9
151
0
160

CENTRAL BUSINESS DISTRICT (CBD) TOLLING PROGRAM

Appendix 4B.4, Transportation: Traffic LOS Adopted Toll Structure

2024

Downtown Brooklyn Study Area - With-Action - AM Peak Hour

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	Volume	V/C	Delay	LOS	Q (50th)	Q (95th)
1	Flatbush Avenue and Tillary Street	NB	NBL	L	L	570	1.17	146.1	F	~256	#420
			NBT	T	T	947	1.21	137.8	F	~516	#585
			NBR	R	R	259	0.46	4.7	A	-	35
		SB	SBT	T	T	631	0.64	40.7	D	176	219
			SBR	R	R	79	0.30	37.4	D	52	99
		EB	EBL	L	L	143	0.93	99.9	F	137	#234
			EBT	T	T	618	0.84	49.1	D	280	326
			EBR	R	R	230	0.86	65.1	E	194	#322
		WB	WBL	L	L	230	0.77	64.9	E	105	#145
			WBT	T	T	368	0.80	48.0	D	215	291
			WBR	R	R	371	0.92	79.2	E	194	#368
		Intersection						80.3	F		
2	Adams Street and Tillary Street	NB	NBL	L	L	0	-	-	-	-	-
			NBT	T	T	617	0.83	48.7	D	272	328
			NBR	T	R	59	0.70	50.3	D	158	#259
			NBR2	R	R2	150	-	-	-	-	-
		SB	SBL	L	L	624	0.90	56.7	E	285	#336
			SBT	T	T	854	0.63	23.6	C	270	340
			SBR	R	R	15	0.03	8.5	A	5	13
		EB	EBL	L	L	0	-	-	-	-	-
			EBT	T	T	196	0.35	36.9	D	75	105
			EBR	R	R	90	-	-	-	-	-
		WB	WBL	L	L	138	0.80	70.9	E	115	#223
			WBT	T	T	227	0.35	37.2	D	86	121
			WBR	R	R	0	-	-	-	-	-
			WBR2	R	R2	27	0.07	32.2	C	16	41
		Intersection						42.3	D		
3	Old Fulton Street and Vine Street	NB	NBL	L	L	1139	1.00	54.2	D	~344	#495
			NBT	T	T	178	0.34	20.1	C	81	124
		SB	SBT	T	T	654	0.56	62.3	E	126	m8
		Intersection						53.7	D		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
#: the volume for the 95th percentile cycle exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

Downtown Brooklyn Study Area - With-Action - LN Peak Hour											
Intersection #	**Intersection Name**	**Approach**	**Movement**	**Lane Group**	**Movement**	**Volume**	**V/C**	**Delay**	**LOS**	**Q (50th)**	**Q (95th)**
1	Flatbush Avenue and Tillary Street	NB	NBL	L	L	465	1.12	132.5	F	~191	#355
			NBT	T	T	562	1.07dl	32.7	C	183	227
			NBR	R	R	405	0.52	6.8	A	32	113
		SB	SBT	T	T	713	0.65	40.8	D	204	242
			SBR	R	R	44	0.15	33.8	C	31	58
		EB	EBL	L	L	78	0.43	54.8	D	57	110
			EBT	T	T	555	0.70	41.5	D	237	280
			EBR	R	R	160	0.49	38.9	D	122	178
		WB	WBL	L	L	243	0.68	58.2	E	103	150
			WBT	T	T	399	0.59	38.4	D	180	218
			WBR	R	R	187	0.59	43.5	D	147	213
		Intersection						42.4	D		
2	Adams Street and Tillary Street	NB	NBL	L	L	0	-	-	-	-	-
			NBT	T	T	475	0.59	39.1	D	174	233
			NBR	T	R	44	0.40	37.0	D	98	144
			NBR2	R	R2	86	-	-	-	-	-
		SB	SBL	L	L	427	0.62	41.4	D	178	214
			SBT	T	T	712	0.54	21.7	C	224	261
			SBR	R	R	0	-	-	-	-	-
		EB	EBL	L	L	0	-	-	-	-	-
			EBT	T	T	115	0.16	34.1	C	38	59
			EBR	R	R	45	-	-	-	-	-
		WB	WBL	L	L	110	0.51	45.3	D	88	138
			WBT	T	T	114	0.18	34.6	C	44	64
			WBR	R	R	0	-	-	-	-	-
			WBR2	R	R2	24	0.06	33.5	C	14	37
		Intersection						33.3	C		
3	Old Fulton Street and Vine Street	NB	NBL	L	L	1265	0.84	26.8	C	442	541
			NBT	T	T	137	0.18	12.7	B	55	86
		SB	SBT	T	T	284	0.33	13.8	B	16	m20
		Intersection						23.3	C		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
#: the volume for the 95th percentile cycle exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

Little Dominican Republic Area - With Action - AM Peak Hour											
Intersection #	**Intersection Name**	**Approach**	**Movement**	**Lane Group**	**Movement**	**Volume**	**V/C**	**Delay**	**LOS**	**Q (50th)**	**Q (95th)**
1	W 179th St & Broadway	NB	NBL	L	L	55	0.15	11.1	B	16	33
			NBT	T	T	210	0.18	10.3	B	31	50
		SB	SBT	T	T	220	0.44	23.0	C	80	107
			SBR	TR	R	80	-	-	-	-	-
		WB	WBL	TR	L	45	-	-	-	-	-
			WBT		T	163	0.75	41.8	D	144	#269
			WBR		R	50	-	-	-	-	-
		Intersection						24.8	C		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
#: the volume for the 95th percentile cycle exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

Little Dominican Republic Area - With Action - MD Peak Hour											
Intersection #	**Intersection Name**	**Approach**	**Movement**	**Lane Group**	**Movement**	**Volume**	**V/C**	**Delay**	**LOS**	**Q (50th)**	**Q (95th)**
1	W 179th St & Broadway	NB	NBL	L	L	140	0.36	15.6	B	44	78
			NBT	T	T	330	0.25	11.4	B	54	80
		SB	SBT	T	T	220	0.44	24.1	C	82	120
			SBR	TR	R	105	-	-	-	-	-
		WB	WBL	TR	L	40	-	-	-	-	-
			WBT		T	257	0.88	50.9	D	213	#362
			WBR		R	50	-	-	-	-	-
		Intersection						27.9	C		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
#: the volume for the 95th percentile cycle exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

Little Dominican Republic Area - With Action - PM Peak Hour											
Intersection #	**Intersection Name**	**Approach**	**Movement**	**Lane Group**	**Movement**	**Volume**	**V/C**	**Delay**	**LOS**	**Q (50th)**	**Q (95th)**
1	W 179th St & Broadway	NB	NBL	L	L	135	0.30	14.1	B	39	71
			NBT	T	T	340	0.27	11.6	B	57	82
		SB	SBT	T	T	230	0.41	23.7	C	80	120
			SBR	TR	R	100	-	-	-	-	-
		WB	WBL	TR	L	35	-	-	-	-	-
			WBT		T	244	0.80	41.6	D	193	#339
			WBR		R	60	-	-	-	-	-
		Intersection						24.3	C		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
#: the volume for the 95th percentile cycle exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

Lower East Side Study Area - With Action - AM Peak Hour											
Intersection #	**Intersection Name**	**Approach**	**Movement**	**Lane Group**	**Movement**	**Volume**	**V/C**	**Delay**	**LOS**	**Q (50th)**	**Q (95th)**
1	Park Row/Chatham Square & Worth/Oliver St & Mott St	NB	NBL	LT	L	10	-	-	-	-	-
			NBT		T	355	0.76	39.1	D	197	#331
			NBR2	R	R2	154	0.42	28.8	C	85	129
		SB	SBL	T	T	75	0.69	66.7	E	46	#106
			SBT	TR	T	50	0.15	23.6	C	28	58
			SBR		R	10	-	-	-	-	-
		EB	EBT	TR	T	20	0.09	22.0	C	15	33
			EBR		R	10	-	-	-	-	-
		WB	WBL	L	L	105	0.36	30.1	C	74	119
			WBT	T	T	15	0.25	23.8	C	43	70
			WBR	TR	R	140	-	-	-	-	-
		SWB	SWL2	LR	L2	55	-	-	-	-	-
			SWL		L	0	0.24	33.0	C	33	62
			SWR		R	0	-	-	-	-	-
		Intersection						34.4	C		
2	Chatham Square & E Broadway	NB	NBL	L	L	95	0.20	16.4	B	39	66
			NBR	R	R	30	0.07	14.9	B	12	26
		EB	EBT	T	T	169	0.16	18.4	B	51	m76
			EBR	R	R	135	0.29	56.9	E	89	m138
		WB	WBL	L	L	120	0.35	12.1	B	47	74
			WBT	T	T	165	0.16	7.0	A	32	44
		Intersection						21.7	C		
3	Chatham Square/Bowery & Divison St	NB	NBL	L	L	140	0.58	41.5	D	90	138
			NBR	T	T	250	0.55	19.8	B	110	171
		EB	EBT	T	T	194	0.24	6.1	A	12	18
			EBR2	TR	R2	5	-	-	-	-	-
		WB	WBL	LT	L	5	-	-	-	-	-
			WBT	T	T	145	0.18	19.4	B	31	54
		Intersection						20.5	C		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
#: the volume for the 95th percentile cycle exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

Lower East Side Study Area - With Action - MD Peak Hour											
Intersection #	**Intersection Name**	**Approach**	**Movement**	**Lane Group**	**Movement**	**Volume**	**V/C**	**Delay**	**LOS**	**Q (50th)**	**Q (95th)**
1	Park Row/Chatham Square & Worth/Oliver St & Mott St	NB	NBL	LT	L	10	-	-	-	-	-
			NBT		T	215	0.49	29.3	C	113	186
			NBR2	R	R2	154	0.42	28.9	C	85	129
		SB	SBL	T	T	145	0.75	65.5	E	90	#167
			SBT	TR	T	75	0.22	24.6	C	40	79
			SBR		R	10	-	-	-	-	-
		EB	EBT	TR	T	20	0.11	22.2	C	20	41
			EBR		R	20	-	-	-	-	-
		WB	WBL	L	L	64	0.20	30.1	C	36	84
			WBT	T	T	20	0.17	26.8	C	31	50
			WBR	TR	R	89	-	-	-	-	-
		SWB	SWL2	LR	L2	40	-	-	-	-	-
			SWL		L	0	0.17	31.8	C	23	48
			SWR		R	0	-	-	-	-	-
		Intersection						34.7	C		
2	Chatham Square & E Broadway	NB	NBL	L	L	85	0.15	15.8	B	31	62
			NBR	R	R	35	0.08	14.9	B	14	30
		EB	EBT	T	T	174	0.17	17.0	B	53	m70
			EBR	R	R	185	0.37	85.3	F	122	m181
		WB	WBL	L	L	130	0.34	12.7	B	48	131
			WBT	T	T	88	0.08	6.7	A	15	30
		Intersection						33.1	C		
3	Chatham Square/Bowery & Divison St	NB	NBL	L	L	110	0.43	36.6	D	66	112
			NBR	T	T	225	0.41	16.3	B	81	140
		EB	EBT	T	T	199	0.24	6.0	A	12	19
			EBR2	TR	R2	10	-	-	-	-	-
		WB	WBL	LT	L	5	-	-	-	-	-
			WBT	T	T	108	0.13	18.8	B	23	42
		Intersection						17.1	B		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
#: the volume for the 95th percentile cycle exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

Lower East Side Study Area - With Action - PM Peak Hour											
Intersection #	**Intersection Name**	**Approach**	**Movement**	**Lane Group**	**Movement**	**Volume**	**V/C**	**Delay**	**LOS**	**Q (50th)**	**Q (95th)**
1	Park Row/Chatham Square & Worth/Oliver St & Mott St	NB	NBL	LT	L	5	-	-	-	-	-
			NBT		T	175	0.37	26.8	C	85	145
			NBR2	R	R2	199	0.54	32.6	C	114	167
		SB	SBL	T	T	165	0.62	42.3	D	83	156
			SBT	TR	T	95	0.24	24.7	C	48	88
			SBR		R	5	-	-	-	-	-
		EB	EBT	TR	T	25	0.09	22.1	C	17	37
			EBR		R	10	-	-	-	-	-
		WB	WBL	L	L	66	0.21	32.8	C	46	86
			WBT	T	T	20	0.20	29.8	C	43	70
			WBR	TR	R	110	-	-	-	-	-
		SWB	SWL2	LR	L2	55	-	-	-	-	-
			SWL		L	0	0.24	33.0	C	33	65
			SWR		R	0	-	-	-	-	-
		Intersection						31.5	C		
2	Chatham Square & E Broadway	NB	NBL	L	L	105	0.20	16.3	B	41	73
			NBR	R	R	45	0.09	15.0	B	18	36
		EB	EBT	T	T	219	0.20	21.0	C	74	85
			EBR	R	R	225	0.39	84.8	F	138	215
		WB	WBL	L	L	125	0.32	15.7	B	61	m125
			WBT	T	T	91	0.08	8.4	A	24	m33
		Intersection						34.5	C		
3	Chatham Square/Bowery & Divison St	NB	NBL	L	L	155	0.62	43.0	D	100	151
			NBR	T	T	395	0.74	26.5	C	198	297
		EB	EBT	T	T	254	0.31	6.8	A	17	23
			EBR2	TR	R2	10	-	-	-	-	-
		WB	WBL	LT	L	5	-	-	-	-	-
			WBT	T	T	61	0.08	18.3	B	13	28
		Intersection						22.9	C		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
#: the volume for the 95th percentile cycle exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

Long Island City Study Area - Action - AM Peak Hour											
Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	Volume	V/C	Delay	LOS	Q (50th)	Q (95th)
1a	Pulaski Bridge / 11th Street & Jackson Avenue	NB	NBL	LT	L	71	-	-	-	-	-
			NBT	T	T	701	1.16	122.5	F	~440	#520
			NBR	R	R	406	0.69	44.8	D	192	234
		SB	SBT	T	T	444	0.68	8.7	A	23	27
			SBR	TR	R	64	-	-	-	-	-
		EB	EBL	LT	L	25	-	-	-	-	-
			EBT	T	T	55	0.19	36.7	D	32	50
		WB	WBL	L	L	465	0.66	43.8	D	170	229
			WBT	T	T	215	0.30	14.7	B	100	137
		Intersection	Intersection					59.1	E		
1b	11th Street & 48TH Avenue	NB	NBL	L	L	65	0.40	2.9	A	2	m2
			NBT	T	T	661	0.63	16.0	B	12	m10
		SB	SBT	T	T	498	0.66	39.2	D	200	264
			SBR	TR	R	15	-	-	-	-	-
		WB	WBL	LTR	L	10	-	-	-	-	-
			WBT		T	25	0.08	17.8	B	24	43
			WBR		R	10	-	-	-	-	-
		Intersection	Intersection					24.4	C		
2	50TH Avenue @ Vernon Blvd	NB	NBT	T	T	207	0.35	14.0	B	51	97
			NBR	R	R	13	0.03	10.8	B	3	12
		SB	SBL	LT	L	44	-	-	-	-	-
			SBT		T	163	0.50	17.7	B	59	118
		EB	EBL	LTR	L	35	-	-	-	-	-
			EBT		T	64	0.31	14.0	B	37	66
			EBR		R	30	-	-	-	-	-
		Intersection	Intersection					15.3	B		
3	Green Street & McGuiness Blvd	NB	NBT	T	T	1151	0.83	26.1	C	415	515
			NBR	TR	R	30	-	-	-	-	-
		SB	SBL	L	L	73	0.75	58.6	E	49	#132
			SBT	T	T	942	0.59	17.7	B	266	314
		EB	EBL	LTR	L	182	-	-	-	-	-
			EBT		T	20	0.62	40.4	D	192	248
			EBR		R	40	-	-	-	-	-
		Intersection	Intersection					25.4	C		
4	McGuinness Blvd & Freeman Street	NB	NBT	T	T	1333	-	-	-	-	-
		SB	SBT	T	T	1015	-	-	-	-	-
			SBR	TR	R	115	-	-	-	-	-
		WB	WBR	R	R	179	-	-	-	-	-
		Intersection	Unsignalized								
5	21th Street & 49th Avenue	NB	NBL	LTR	L	35	-	-	-	-	-
			NBT		T	90	0.57	32.9	C	88	161
			NBR		R	40	-	-	-	-	-
		SB	SBL	LTR	L	98	-	-	-	-	-
			SBT		T	127	1.04	95.3	F	~179	#285
			SBR		R	10	-	-	-	-	-
		EB	EBL	LTR	L	36	-	-	-	-	-
			EBT		T	132	0.46	23.8	C	90	135
			EBR		R	10	-	-	-	-	-
		WB	WBL	LT	L	5	-	-	-	-	-
			WBT		T	40	0.11	17.8	B	19	39
			WBR	R	R	310	0.91	57.4	E	179	#351
		Intersection	Intersection					54.5	D		
7	11th Street & Borden Avenue	NB	NBL	LTR	L	16	-	-	-	-	-
			NBT		T	66	-	-	-	-	-
			NBR		R	16	-	-	-	-	-
		SB	SBL	LTR	L	26	-	-	-	-	-
			SBT		T	0	-	-	-	-	-
			SBR		R	94	-	-	-	-	-
		EB	EBL	LTR	L	578	-	-	-	-	-
			EBT		T	50	-	-	-	-	-
			EBR		R	18	-	-	-	-	-
		WB	WBL	LTR	L	40	-	-	-	-	-
			WBT		T	422	-	-	-	-	-
			WBR		R	57	-	-	-	-	-
		Intersection	Unsignalized								
8a	Van Dam Street & QMT Expy	NB	NBL	LT	L	22	-	-	-	-	-
			NBT	T	T	297	0.41	7.0	A	16	18
		SB	SBT	T	T	769	0.63	63.1	E	255	325
			SBR	TR	R	17	-	-	-	-	-
		WB	WBT	T	T	846	0.67	25.6	C	256	294
			WBR	TR	R	259	-	-	-	-	-
		Intersection	Intersection					35.3	D		
8b	Van Dam Street & Borden Avenue	NB	NBT	T	T	290	0.56	42.6	D	127	159
			NBR	TR	R	5	-	-	-	-	-
		SB	SBL	L	L	588	0.90	92.5	F	277	#369
			SBT	T	T	181	0.26	3.0	A	4	6
		EB	EBL	LTR	L	29	-	-	-	-	-
			EBT		T	185	0.31	28.9	C	78	108
			EBR		R	15	-	-	-	-	-
		Intersection	Intersection					56.1	E		
9	Jackson Ave / Northern Blvd & Queens Plaza	NB	NBL	LT	L	0	-	-	-	-	-
			NBT		T	199	0.50	47.3	D	95	127
			NBR	TR	R	15	-	-	-	-	-
		SB	SBL	LT	L	15	-	-	-	-	-
			SBT	T	T	135	0.40	39.0	D	55	76
		EB	EBT	T	T	845	0.42	21.9	C	164	200
			EBR	R	R	287	0.58	28.2	C	191	258
		WB	WBL	LT	L	50	-	-	-	-	-
			WBT	T	T	722	0.48	15.3	B	133	164
			WBR	TR	R	60	-	-	-	-	-
		Intersection	Intersection					24.2	C		
10	Thomson Avenue & Van Dam Street	NB	NBL	L	L	44	0.16	31.3	C	29	58
			NBT	T	T	266	0.59	59.8	E	157	206
			NBR	TRR2	R	0	-	-	-	-	-
			NBR2		R2	25	-	-	-	-	-
		SB	SBT	T	T	446	0.82	68.2	E	264	307
			SBR	R	R	15	0.09	51.3	D	15	36
		EB	EBR	R	R	110	0.11	15.3	B	32	47
			EBR2	R2	R2	90	0.12	11.4	B	41	61
		WB	WBT	T	T	1030	0.67	41.2	D	329	383
		Intersection	Intersection					47.1	D		
11a	Thomson Avenue & Dutch Kills Street	SB	SBL	L	L	0	-	-	-	-	-
			SBR	LR	R	0	-	-	-	-	-
		EB	EBT	T	T	388	-	-	-	-	-
		WB	WBT	T	T	385	-	-	-	-	-
			WBR	R	R	896	-	-	-	-	-
		Intersection	Intersection								
11b	Thomson Avenue & Dutch Kills Street	WB	WBT	T	T	1281	-	-	-	-	-
			WBR	R	R	721	-	-	-	-	-
		EB	EBT	T	T	388	-	-	-	-	-
		Intersection	Unsignalized								
12	21th Street & Queens Plaza N	NB	NBL	LT	L	0	-	-	-	-	-
			NBT	T	T	356	0.46	17.4	B	175	247
		SB	SBT	T	T	951	1.06	72.2	E	~899	#1154
			SBR	R	R	350	0.45	17.0	B	179	233
		WB	WBL	LTR	L	120	-	-	-	-	-
			WBT		T	66	0.67	45.4	D	223	305
			WBR		R	82	-	-	-	-	-
		Intersection	Intersection					47.7	D		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
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Lower Manhattan Study Area - Build - AM Peak Hour											
Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	Volume	V/C	Delay	LOS	Q (50th)	Q (95th)
1	Trinity Place & Edgar Street	NB	NBL	LT	L	0	-	-	-	-	-
			NBT	T	T	42	0.04	9.8	A	6	14
		EB	EBL	L	L	35	0.09	20.7	C	16	35
		Intersection	Intersection					15.0	B		
2	Trinity Place & Rector Street	NB	NBT	T	T	70	0.11	10.2	B	13	23
			NBR	R	R	7	-	-	-	-	-
		EB	EBL	LT	L	100	-	-	-	-	-
			EBT		T	34	0.51	31.6	C	74	119
		Intersection	Intersection					23.7	C		
3a	HCT Entrance/Exit & West Street	NB	NBT	T	T	1024	0.71	44.4	D	328	384
			NBR2	R2	R2	444	0.28	0.5	A	-	-
		SB	SBT	T	T	1005	0.62	1.3	A	-	-
		WB	WBL	L	L	1692	0.97	53.0	D	618	#741
		Intersection	Intersection					32.6	C		
3b	HCT Exit & West Street & West Thames Street	NB	NBT	T	T	1024	0.59	1.2	A	-	-
		SB	SBT	T	T	1005	0.73	45.0	D	342	399
			SBR	R	R	0	-	-	-	-	-
		EB	EBR	R	R	0	-	-	-	-	-
		WB	WBR	R	R	1239	0.82	38.4	D	438	513
		Intersection	Intersection					29.2	C		
4	Chambers Street & Centre Street	NB	NBL	L	L	396	0.44	25.9	C	100	143
			NBT	T	T	457	0.52	12.9	B	158	232
		SB	SBT	TR	T	213	0.71	44.7	D	137	199
			SBR		R	27	0.25	34.7	C	16	38
		EB	EBR	R	R	393	0.89	51.0	D	239	#400
		Intersection	Intersection					31.6	C		
5a	Canal Street & Hudson Street/Holland Tunnel On-Ramp	NB	NBL	LTR	L	105	-	-	-	-	-
			NBT		T	670	0.86	40.8	D	179	#255
			NBR		R	150	0.44	31.3	C	76	144
			NBR2	R2	R2	45	0.24	27.8	C	24	51
		EB	EBL2	L2L	L2	49	-	-	-	-	-
			EBL		L	335	0.63	35.9	D	109	159
			EBT	T	T	555	0.67	18.4	B	216	337
		WB	WBT	T	T	337	0.67	17.9	B	35	m42
			WBR	R	R	73	-	-	-	-	-
		Intersection	Intersection					29.8	C		
5b	Canal Street & Holland Tunnel On-Ramp	EB	EBT	T	T	600	0.39	5.0	A	28	36
		WB	WBT	T	T	410	0.96	57.8	E	200	#320
			WBR	R	R	880	1.14	100.9	F	~548	#785
		Intersection	Intersection					57.2	E		
7a	Canal Street S & West Street	NB	NBT	T	T	2659	0.99	48.1	D	803	#928
			NBR	R	R	277	0.58	27.0	C	230	307
		SB	SBL	L	L	675	0.69	113.1	F	380	446
			SBT	T	T	2105	0.74	8.0	A	446	500
		Intersection	Intersection					40.0	D		
7b	Canal Street N & West Street	NB	NBT	T	T	2659	0.59	0.9	A	-	m0
		SB	SBT	T	T	2780	0.55	8.0	A	252	268
		WB	WBL	LR	L	0	-	-	-	-	-
			WBR		R	0	-	-	-	-	-
		Intersection	Intersection					4.5	A		
9	West Street & Albany Street	NB	NBT	T	T	2217	0.77	25.1	C	493	538
			NBR	TR	R	92	-	-	-	-	-
			SBL		L	5	-	-	-	-	-
		SB	SBT	T	T	1657	0.58	19.8	B	271	300
			SBR	R	R	136	-	-	-	-	-
		EB	EBL	L	L	134	-	-	-	-	-
			EBT	T	T	90	0.76	58.1	E	290	359
			EBR	R	R	64	-	-	-	-	-
		Intersection	Intersection					25.3	C		
10	West Street & Vesey Street	NB	NBL	L	L	5	-	-	-	-	-
			NBT	T	T	2232	0.69	19.8	B	410	448
		SB	SBT	T	T	1857	0.69	20.1	C	443	495
			SBR	R	R	321	0.83	41.1	D	256	#490
		EB	EBL	L	L	104	0.57	57.5	E	107	161
			EBR	R	R	79	0.39	48.8	D	73	123
		WB	WBL	LT	L	0	-	-	-	-	-
			WBT		T	0	-	-	-	-	-
			WBR	R	R	0	-	-	-	-	-
		Intersection	Intersection					23.0	C		
11	West Street & Chambers Street	NB	NBT	T	T	2240	0.84	36.5	D	577	627
			NBR	TR	T	63	-	-	-	-	-
		SB	SBL	L	L	222	0.74	78.3	E	132	168
			SBT	T	T	1775	0.63	17.0	B	376	420
			SBR	R	R	48	0.25	57.0	E	51	87
		EB	EBL	LTR	L	103	-	-	-	-	-
			EBT		T	30	0.57	55.2	E	152	238
			EBR		R	15	-	-	-	-	-
		WB	WBL	LT	L	69	-	-	-	-	-
			WBT		T	60	0.57	56.6	E	131	201
			WBR	R	R	305	0.74	45.9	D	287	354
		Intersection	Intersection					33.8	C		
14	Canal Street/Manhattan Bridge & Bowery	EB	EBT	T	T	709	0.73	27.2	C	220	245
			EBR	R	R	103	0.29	20.7	C	47	81
		WB	WBT	T	T	989	0.91	38.2	D	283	#414
		NB	NBT	T	T	289	0.55	34.8	C	90	126
			NBR	R	R	284	0.30	0.7	A	-	-
		SB	SBL	L	L	240	0.45	12.5	B	15	65
			SBT	TR	T	136	0.53	9.3	A	30	57
			SBR		R	74	-	-	-	-	-
		Intersection	Intersection					25.7	C		
15	Manhattan Bridge & Bowery	NB	NBT	T	T	289	0.50	6.6	A	8	10
		SB	SBT	T	T	450	0.29	17.7	B	71	90
		WB	WBR	R	R	377	0.64	32.7	C	127	165
		Intersection	Intersection					19.9	B		
18	6th Avenue & Watts Street	WB	WBT	TR	T	718	0.34	16.9	B	84	108
			WBR		R	25	-	-	-	-	-
		NB	NBL	LT	L	72	-	-	-	-	-
			NBT		T	901	0.42	11.8	B	49	m56
		Intersection	Intersection					13.9	B		
19	Canal Street & 6th Avenue/Laight Street	NEB	NER	R	R	568	0.95	58.9	E	160	#238
		NB	NBL	LTR	L	157	-	-	-	-	-
			NBT		T	650	0.49	23.7	C	114	145
			NBR		R	4	-	-	-	-	-
		EB	EBT	T	T	617	0.78	37.7	D	178	244
		WB	WBT	TR	T	1148	1.03	57.6	E	~335	#427
			WBR		R	250	-	-	-	-	-
		Intersection	Intersection					46.0	D		

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Lower Manhattan Study Area - Build - MD Peak Hour											
Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	Volume	V/C	Delay	LOS	Q (50th)	Q (95th)
1	Trinity Place & Edgar Street	NB	NBL	LT	L	4	-	-	-	-	-
			NBT	T	T	34	0.03	9.6	A	5	13
		EB	EBL	L	L	291	0.69	33.7	C	173	236
		Intersection	Intersection					31.2	C		
2	Trinity Place & Rector Street	NB	NBT	T	T	264	0.40	41.2	D	114	151
			NBR	R	R	61	-	-	-	-	-
		EB	EBL	LT	L	109	-	-	-	-	-
			EBT		T	44	0.41	24.2	C	76	124
		Intersection	Intersection					35.7	D		
3a	HCT Entrance/Exit & West Street	NB	NBT	T	T	976	0.55	24.3	C	215	260
			NBR2	R2	R2	787	0.41	0.8	A	-	-
		SB	SBT	T	T	1330	0.61	1.0	A	-	-
		WB	WBL	L	L	860	0.65	36.0	D	215	264
		Intersection	Intersection					14.4	B		
3b	HCT Exit & West Street & West Thames Street	NB	NBT	T	T	976	0.46	0.6	A	-	-
		SB	SBT	T	T	1330	0.71	28.1	C	316	373
			SBR	R	R	0	-	-	-	-	-
		EB	EBR	R	R	0	-	-	-	-	-
		WB	WBR	R	R	852	0.76	40.2	D	237	295
		Intersection	Intersection					22.5	C		
4	Chambers Street & Centre Street	NB	NBL	L	L	289	0.36	24.7	C	75	105
			NBT	T	T	364	0.40	11.0	B	104	163
		SB	SBT	TR	T	201	0.68	43.0	D	128	188
			SBR		R	13	0.18	34.0	C	7	24
		EB	EBR	R	R	398	0.90	52.6	D	249	#399
		Intersection	Intersection					33.3	C		
5a	Canal Street & Hudson Street/Holland Tunnel On-Ramp	NB	NBL	LTR	L	75	-	-	-	-	-
			NBT		T	515	0.96	58.7	E	207	#288
			NBR		R	214	0.38	27.5	C	66	94
			NBR2	R2	R2	55	0.29	29.5	C	28	61
		EB	EBL2	L2L	L2	30	-	-	-	-	-
			EBL		L	206	0.43	31.8	C	71	100
			EBT	T	T	315	0.39	12.5	B	98	157
		WB	WBT	T	T	163	0.47	7.9	A	8	13
			WBR	R	R	27	0.12	4.8	A	1	m3
		Intersection	Intersection					35.0	C		
5b	Canal Street & Holland Tunnel On-Ramp	EB	EBT	T	T	370	0.25	5.8	A	26	36
		WB	WBT	T	T	190	0.55	34.1	C	103	174
			WBR	R	R	605	0.58	15.2	B	127	186
		Intersection	Intersection					15.5	B		
7a	Canal Street S & West Street	NB	NBT	T	T	2100	0.92	36.6	D	477	543
			NBR	R	R	141	0.35	22.1	C	91	138
		SB	SBL	L	L	349	0.36	43.2	D	161	200
			SBT	T	T	1835	0.68	6.1	A	308	360
		Intersection	Intersection					24.1	C		
7b	Canal Street N & West Street	NB	NBT	T	T	2100	0.52	0.4	A	-	-
		SB	SBT	T	T	2184	0.45	8.3	A	169	188
		WB	WBL	LR	L	0	-	-	-	-	-
			WBR		R	0	-	-	-	-	-
		Intersection	Intersection					4.4	A		
9	West Street & Albany Street	NB	NBT	T	T	1474	0.60	20.3	C	247	285
			NBR	TR	R	85	-	-	-	-	-
			SBL		L	5	-	-	-	-	-
		SB	SBT	T	T	2126	0.75	23.6	C	331	370
			SBR	R	R	86	-	-	-	-	-
		EB	EBL	L	L	101	-	-	-	-	-
			EBT	T	T	95	0.59	36.3	D	190	252
			EBR	R	R	63	-	-	-	-	-
		Intersection	Intersection					23.2	C		
10	West Street & Vesey Street	NB	NBL	L	L	10	-	-	-	-	-
			NBT	T	T	1841	0.71	22.8	C	313	357
		SB	SBT	T	T	2117	0.86	28.4	C	517	591
			SBR	R	R	164	0.40	20.1	C	79	138
		EB	EBL	L	L	139	0.54	39.0	D	97	166
			EBR	R	R	151	0.46	34.8	C	94	162
		WB	WBL	LT	L	0	-	-	-	-	-
			WBT		T	0	-	-	-	-	-
			WBR	R	R	0	-	-	-	-	-
		Intersection	Intersection					26.3	C		
11	West Street & Chambers Street	NB	NBT	T	T	1868	0.82	34.1	C	395	446
			NBR	TR	T	43	-	-	-	-	-
		SB	SBL	L	L	171	0.45	52.5	D	72	108
			SBT	T	T	2002	0.72	18.1	B	390	446
			SBR	R	R	81	0.34	45.0	D	67	107
		EB	EBL	LTR	L	43	-	-	-	-	-
			EBT		T	0	0.18	33.4	C	38	67
			EBR		R	10	-	-	-	-	-
		WB	WBL	LT	L	73	-	-	-	-	-
			WBT		T	65	0.53	42.6	D	110	161
			WBR	R	R	272	0.58	27.4	C	174	229
		Intersection	Intersection					28.1	C		
14	Canal Street/Manhattan Bridge & Bowery	EB	EBT	T	T	435	0.45	21.5	C	101	144
			EBR	R	R	123	0.34	21.5	C	59	95
		WB	WBT	T	T	554	0.56	23.4	C	137	192
		NB	NBT	T	T	255	0.44	31.1	C	78	106
			NBR	R	R	293	0.30	0.7	A	-	-
		SB	SBL	L	L	224	0.45	12.8	B	6	76
			SBT	TR	T	116	0.47	7.9	A	10	44
			SBR		R	65	-	-	-	-	-
		Intersection	Intersection					17.8	B		
15	Manhattan Bridge & Bowery	NB	NBT	T	T	253	0.23	0.7	A	-	-
		SB	SBT	T	T	405	0.26	17.4	B	62	81
		WB	WBR	R	R	143	0.11	6.7	A	19	30
		Intersection	Intersection					10.1	B		
18	6th Avenue & Watts Street	WB	WBT	TR	T	697	0.33	16.8	B	83	107
			WBR		R	24	-	-	-	-	-
		NB	NBL	LT	L	72	-	-	-	-	-
			NBT		T	770	0.34	7.5	A	25	32
		Intersection	Intersection					11.8	B		
19	Canal Street & 6th Avenue/Laight Street	NEB	NER	R	R	309	0.55	36.2	D	78	114
		NB	NBL	LTR	L	148	-	-	-	-	-
			NBT		T	657	0.46	23.3	C	109	138
			NBR		R	3	-	-	-	-	-
		EB	EBT	T	T	376	0.53	30.3	C	105	152
		WB	WBT	TR	T	642	0.63	21.2	C	133	178
			WBR		R	131	-	-	-	-	-
		Intersection	Intersection					25.5	C		

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Lower Manhattan Study Area - Build - PM Peak Hour											
Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	Volume	V/C	Delay	LOS	Q (50th)	Q (95th)
1	Trinity Place & Edgar Street	NB	NBL	LT	L	0	-	-	-	-	-
			NBT	T	T	0	-	-	-	-	-
		EB	EBL	L	L	136	0.28	23.3	C	63	110
		Intersection	Intersection					23.3	C		
2	Trinity Place & Rector Street	NB	NBT	T	T	121	0.19	35.6	D	42	68
			NBR	R	R	15	-	-	-	-	-
		EB	EBL	LT	L	68	-	-	-	-	-
			EBT		T	38	0.30	22.2	C	51	86
		Intersection	Intersection					29.6	C		
3a	HCT Entrance/Exit & West Street	NB	NBT	T	T	538	0.30	23.2	C	134	151
			NBR2	R2	R2	1206	0.61	1.2	A	-	-
		SB	SBT	T	T	1197	0.57	0.8	A	-	-
		WB	WBL	L	L	349	0.29	35.7	D	96	126
		Intersection	Intersection					8.4	A		
3b	HCT Exit & West Street & West Thames Street	NB	NBT	T	T	538	0.26	0.5	A	-	-
		SB	SBT	T	T	1197	0.63	29.7	C	348	393
			SBR	R	R	0	-	-	-	-	-
		EB	EBR	R	R	0	-	-	-	-	-
		WB	WBR	R	R	510	0.48	39.5	D	174	208
		Intersection	Intersection					24.7	C		
4	Chambers Street & Centre Street	NB	NBL	L	L	374	0.43	25.7	C	93	134
			NBT	T	T	448	0.55	13.5	B	164	229
		SB	SBT	TR	T	290	0.97	77.4	E	195	#327
			SBR		R	12	0.14	31.9	C	7	22
		EB	EBR	R	R	464	1.08	93.2	F	~353	#492
		Intersection	Intersection					52.1	D		
5a	Canal Street & Hudson Street/Holland Tunnel On-Ramp	NB	NBL	LTR	L	45	-	-	-	-	-
			NBT		T	585	0.88	44.6	D	195	#297
			NBR		R	159	0.26	25.8	C	44	73
			NBR2	R2	R2	8	0.04	23.8	C	4	14
		EB	EBL2	L2L	L2	5	-	-	-	-	-
			EBL		L	178	0.32	30.2	C	54	77
			EBT	T	T	419	0.49	14.1	B	144	222
		WB	WBT	T	T	0	-	-	-	-	-
			WBR	R	R	0	-	-	-	-	-
		Intersection	Intersection					31.4	C		
5b	Canal Street & Holland Tunnel On-Ramp	EB	EBT	T	T	427	0.27	3.1	A	11	15
		WB	WBT	T	T	0	-	-	-	-	-
			WBR	R	R	1405	1.23	131.8	F	~628	#773
		Intersection	Intersection					102.6	F		
7a	Canal Street S & West Street	NB	NBT	T	T	2629	0.96	41.1	D	752	820
			NBR	R	R	5	0.01	14.8	B	2	9
		SB	SBL	L	L	484	0.53	112.1	F	293	345
			SBT	T	T	1734	0.60	5.0	A	58	55
		Intersection	Intersection					35.9	D		
7b	Canal Street N & West Street	NB	NBT	T	T	2629	0.60	0.8	A	-	-
		SB	SBT	T	T	2218	0.44	8.6	A	201	217
		WB	WBL	LR	L	0	-	-	-	-	-
			WBR		R	0	-	-	-	-	-
		Intersection	Intersection					4.4	A		
9	West Street & Albany Street	NB	NBT	T	T	1227	0.46	20.1	C	221	251
			NBR	TR	R	47	-	-	-	-	-
			SBL		L	0	-	-	-	-	-
		SB	SBT	T	T	2192	0.66	24.1	C	382	413
			SBR	R	R	76	-	-	-	-	-
		EB	EBL	L	L	139	-	-	-	-	-
			EBT	T	T	90	0.71	50.4	D	294	412
			EBR	R	R	81	-	-	-	-	-
		Intersection	Intersection					25.0	C		
10	West Street & Vesey Street	NB	NBL	L	L	0	-	-	-	-	-
			NBT	T	T	1462	0.42	14.7	B	216	241
		SB	SBT	T	T	2345	0.79	23.3	C	610	672
			SBR	R	R	134	0.31	15.2	B	64	109
		EB	EBL	L	L	99	0.57	57.9	E	102	156
			EBR	R	R	121	0.60	58.5	E	118	191
		WB	WBL	LT	L	10	-	-	-	-	-
			WBT		T	0	0.05	39.7	D	9	25
			WBR	R	R	0	-	-	-	-	-
		Intersection	Intersection					22.1	C		
11	West Street & Chambers Street	NB	NBT	T	T	1754	0.70	33.9	C	420	463
			NBR	TR	T	35	-	-	-	-	-
		SB	SBL	L	L	183	0.77	85.0	F	112	143
			SBT	T	T	1809	0.67	22.1	C	448	498
			SBR	R	R	90	0.44	66.6	E	85	146
		EB	EBL	LTR	L	49	-	-	-	-	-
			EBT		T	20	0.26	39.6	D	66	101
			EBR		R	5	-	-	-	-	-
		WB	WBL	LT	L	126	-	-	-	-	-
			WBT		T	90	0.73	58.4	E	224	329
			WBR	R	R	392	0.72	40.4	D	301	423
		Intersection	Intersection					34.1	C		
14	Canal Street/Manhattan Bridge & Bowery	EB	EBT	T	T	800	0.76	27.7	C	221	297
			EBR	R	R	83	0.29	21.1	C	38	69
		WB	WBT	T	T	347	0.33	19.6	B	84	110
		NB	NBT	T	T	167	0.29	29.0	C	46	74
			NBR	R	R	472	0.42	1.1	A	-	-
		SB	SBL	L	L	400	0.60	15.1	B	64	98
			SBT	TR	T	46	0.11	3.6	A	2	4
			SBR		R	16	0.05	2.8	A	1	2
		Intersection	Intersection					18.4	B		
15	Manhattan Bridge & Bowery	NB	NBT	T	T	167	0.15	1.5	A	2	2
		SB	SBT	T	T	462	0.23	17.0	B	55	70
		WB	WBR	R	R	222	0.17	7.1	A	32	45
		Intersection	Intersection					11.2	B		
18	6th Avenue & Watts Street	WB	WBT	TR	T	195	0.10	14.7	B	22	30
			WBR		R	0	-	-	-	-	-
		NB	NBL	LT	L	132	-	-	-	-	-
			NBT		T	483	0.27	34.6	C	81	m106
		Intersection	Intersection					29.5	C		
19	Canal Street & 6th Avenue/Laight Street	NEB	NER	R	R	346	0.61	37.4	D	92	125
		NB	NBL	LTR	L	37	-	-	-	-	-
			NBT		T	591	0.36	22.1	C	86	110
			NBR		R	3	-	-	-	-	-
		EB	EBT	T	T	351	0.47	29.2	C	101	137
		WB	WBT	TR	T	1247	0.90	31.2	C	283	301
			WBR		R	9	-	-	-	-	-
		Intersection	Intersection					29.6	C		

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Queens Midtown Tunnel Study Area - With Action (no mitigation) - MD Peak Hour											
Intersection #	**Intersection Name**	**Approach**	**Movement**	**Lane Group**	**Movement**	**Volume**	**V/C**	**Delay**	**LOS**	**Q (50th)**	**Q (95th)**
1	E 37th Street & 3rd Avenue	NB	NBL	L	L	39	0.10	4.6	A	3	m5
			NBT	T	T	576	0.44	4.8	A	14	23
		WB	WBT	T	T	574	0.95	48.2	D	178	#291
			WBR	R	R	259	0.71	43.9	D	96	131
		Intersection	Intersection					29.0	C		
2	E 36th Street & 2nd Avenue	SB	SBL	L	L	207	0.37	27.6	C	53	86
			SBT	T	T	1012	0.49	11.6	B	121	155
		EB	EBT	T	T	1142	1.21	134.3	F	~353	#445
			EBR	TR	R	84	-	-	-	-	-
		WB	WBL	L	L	0	-	-	-	-	-
		Intersection	Intersection					75.3	E		
3	E 34th Street & 3rd Avenue	NB	NBL	LT	L	22	-	-	-	-	-
			NBT	T	T	967	0.43	17.9	B	100	123
			NBR	R	R	162	0.73	41.9	D	78	#191
		EB	EBT	T	T	397	0.86	45.2	D	228	#402
		WB	WBT	T	T	420	0.91	52.5	D	243	#431
			WBR	R	R	78	0.29	23.2	C	38	69
		Intersection	Intersection					32.4	C		
4	E 35th Street & 3rd Avenue	NB	NBL	LT	L	78	-	-	-	-	-
			NBT	T	T	967	0.74	11.6	B	249	320
		WB	WBT	T	T	477	0.52	24.6	C	130	180
			WBR	TR	R	56	0.18	21.1	C	26	51
		Intersection	Intersection					16.0	B		
5	E 34th Street & 2nd Ave	SB	SBL	L	L	225	0.37	29.7	C	75	110
			SBT	T	T	1299	0.71	21.4	C	285	342
			SBR	R	R	42	0.32	18.0	B	12	m31
		EB	EBT	T	T	557	0.71	32.7	C	158	221
			EBR	TR	R	126	0.57	36.9	D	65	130
		WB	WBT	T	T	231	0.57	32.0	C	122	202
		Intersection	Intersection					26.5	C		
6	E 35th Street & 2nd Ave	SB	SBT	T	T	1018	0.56	12.0	B	50	m57
			SBR	R	R	78	-	-	-	-	-
		EB	EBR	R	R	468	0.61	25.9	C	128	188
		WB	WBT	T	T	85	0.14	18.3	B	27	42
			WBL	L	L	80	0.14	18.9	B	26	50
		Intersection	Intersection					16.4	B		

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Queens Midtown Tunnel Study Area - With Action (no mitigation) - LN Peak Hour											
Intersection #	**Intersection Name**	**Approach**	**Movement**	**Lane Group**	**Movement**	**Volume**	**V/C**	**Delay**	**LOS**	**Q (50th)**	**Q (95th)**
1	E 37th Street & 3rd Avenue	NB	NBL	L	L	22	0.07	3.5	A	1	m3
			NBT	T	T	976	0.51	4.5	A	15	18
		WB	WBT	T	T	372	0.29	14.4	B	72	101
			WBR	R	R	346	1.00	83.7	F	~136	#213
		Intersection	Intersection					23.9	C		
2	E 36th Street & 2nd Avenue	SB	SBL	L	L	368	0.46	28.4	C	90	133
			SBT	T	T	1467	0.64	13.8	B	200	247
		EB	EBT	T	T	520	0.50	27.7	C	104	140
			EBR	TR	R	47	-	-	-	-	-
		WB	WBL	L	L	0	-	-	-	-	-
		Intersection	Intersection					19.3	B		
3	E 34th Street & 3rd Avenue	NB	NBL	LT	L	36	-	-	-	-	-
			NBT	T	T	1167	0.48	18.4	B	124	151
			NBR	R	R	184	0.54	24.9	C	84	152
		EB	EBT	T	T	432	0.45	23.3	C	105	151
		WB	WBT	T	T	288	0.32	21.6	C	68	101
			WBR	R	R	94	0.31	23.2	C	46	80
		Intersection	Intersection					20.6	C		
4	E 35th Street & 3rd Avenue	NB	NBL	LT	L	51	-	-	-	-	-
			NBT	T	T	1210	0.49	4.2	A	17	20
		WB	WBT	T	T	392	0.43	23.1	C	107	143
			WBR	TR	R	52	0.14	20.4	C	24	48
		Intersection	Intersection					9.4	A		
5	E 34th Street & 2nd Ave	SB	SBL	L	L	338	0.55	26.3	C	119	152
			SBT	T	T	1334	0.69	13.1	B	230	270
			SBR	R	R	98	0.26	7.7	A	15	m23
		EB	EBT	T	T	588	0.62	29.1	C	136	165
			EBR	TR	R	70	-	-	-	-	-
		WB	WBT	T	T	181	0.24	24.0	C	47	71
		Intersection	Intersection					19.7	B		
6	E 35th Street & 2nd Ave	SB	SBT	T	T	1423	0.65	11.3	B	55	62
			SBR	R	R	91	-	-	-	-	-
		EB	EBR	R	R	273	0.34	20.8	C	65	101
		WB	WBT	T	T	78	0.12	18.0	B	23	42
			WBL	L	L	74	0.11	18.5	B	23	45
		Intersection	Intersection					13.2	B		

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RFK Bridge Study Area - Action - AM Peak Hour

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	Volume	V/C	Delay	LOS	Q (50th)	Q (95th)
1	126th Street and 2nd Avenue	NW	NWL2	L	L2	30	-	-	-	-	-
			NWL		L	190	0.97	85.0	F	150	#271
			NWR	R	R	415	0.31	7.3	A	61	79
		SB	SBT	TR	T	1183	0.53	21.5	C	123	149
			SBR		R	42	-	-	-	-	-
		WB	WBL	L	L	39	-	-	-	-	-
			WBT	T	T	29	0.77	54.7	D	104	#178
			WBR	R	R	90	-	-	-	-	-
		Intersection	Intersection					28.5	C		
2	125th Street and 2nd Avenue	SB	SBL	L	L	502	0.54	7.5	A	23	m30
			SBT	TR	T	699	0.54	6.7	A	20	m24
			SBR		R	51	-	-	-	-	-
		SW	SWL	L	L	453	1.22	147.1	F	~256	#342
			SWR	R	R	153	-	-	-	-	-
		EB	EBT	TR	T	672	0.92	50.4	D	168	#228
			EBR		R	40	-	-	-	-	-
		WB	WBL	LT	L	11	-	-	-	-	-
			WBT		T	29	0.10	27.2	C	10	24
		Intersection	Intersection					52.7	D		
11	E 134th Street & St. Ann's Avenue	NB	NBT	TR	T	140	0.46	18.5	B	98	m125
			NBR		R	80	-	-	-	-	-
		SB	SBL	LT	L	145	-	-	-	-	-
			SBT		T	105	0.62	20.2	C	76	128
		EB	EBL	LTR	L	140	-	-	-	-	-
			EBT		T	120	0.80	33.1	C	116	#213
			EBR		R	45	-	-	-	-	-
		Intersection	Intersection					24.8	C		
22	St Ann's Ave and Bruckner Blvd	NB	NBL	LTR	L	25	-	-	-	-	-
			NBT		T	105	0.56	46.0	D	119	196
			NBR		R	30	-	-	-	-	-
		SB	SBL	LTR	L	55	-	-	-	-	-
			SBT		T	70	0.57	48.6	D	134	m186
			SBR		R	25	-	-	-	-	-
		EB	EBL	LTR	L	50	-	-	-	-	-
			EBT		T	1440	0.90	25.6	C	505	657
			EBR		R	30	-	-	-	-	-
		WB	WBL	LTR	L	40	-	-	-	-	-
			WBT		T	480	0.50	11.6	B	131	157
			WBR		R	65	-	-	-	-	-
		Intersection	Intersection					24.9	C		
17	31st St & Astoria Blvd	NB	NBT	T	T	70	0.19	36.1	D	48	88
			NBR	R	R	13	0.02	7.2	A	4	11
		SB	SBT	T	T	547	0.61	26.3	C	409	543
			SBR	R	R	169	0.40	23.9	C	110	183
		EB	EBL	L	L	11	-	-	-	-	-
			EBT	T	T	382	0.54	33.2	C	163	197
			EBR	R	R	27	-	-	-	-	-
		Intersection	Intersection					28.9	C		
24	Hoyt N & 31st St	NB	NBL	L	L	15	-	-	-	-	-
			NBT	T	T	75	0.16	19.3	B	40	m61
		SB	SBT	T	T	243	0.77	107.2	F	171	208
			SBR	R	R	129	-	-	-	-	-
		WB	WBL	L	L	402	0.26	9.3	A	73	92
			WBT	T	T	2109	0.65	13.9	B	277	314
			WBR	R	R	35	0.10	8.5	A	11	24
		Intersection	Intersection					26.3	C		
3	Hoyt S & 31st St	NB	NBT	T	T	74	0.12	22.6	C	13	20
			NBR	R	R	7	-	-	-	-	-
		SB	SBL	L	L	20	-	-	-	-	-
			SBT	T	T	625	0.37	14.8	B	203	254
		EB	EBL	L	L	16	-	-	-	-	-
			EBT	T	T	940	0.83	48.5	D	236	265
			EBR	R	R	91	0.39	42.0	D	72	114
		Intersection	Intersection					35.1	D		

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RFK Bridge Study Area - Action - PM Peak Hour											
Intersection #	**Intersection Name**	**Approach**	**Movement**	**Lane Group**	**Movement**	**Volume**	**V/C**	**Delay**	**LOS**	**Q (50th)**	**Q (95th)**
1	126th Street and 2nd Avenue	NW	NWL2	L	L2	25	-	-	-	-	-
			NWL		L	180	0.93	76.4	E	140	#244
			NWR	R	R	765	0.55	10.0	B	138	176
		SB	SBT	TR	T	1332	0.53	21.4	C	132	157
			SBR		R	31	-	-	-	-	-
		WB	WBL	L	L	42	-	-	-	-	-
			WBT	T	T	22	0.50	37.5	D	66	108
			WBR	R	R	44	-	-	-	-	-
		Intersection	Intersection					23.5	C		
2	125th Street and 2nd Avenue	SB	SBL	L	L	633	0.66	9.8	A	28	m35
			SBT	TR	T	715	0.47	6.1	A	20	m24
			SBR		R	51	-	-	-	-	-
		SW	SWL	L	L	583	1.39	216.6	F	~339	#455
			SWR	R	R	218	-	-	-	-	-
		EB	EBT	TR	T	731	0.86	43.2	D	160	#227
			EBR		R	20	-	-	-	-	-
		WB	WBL	LT	L	26	-	-	-	-	-
			WBT		T	83	0.26	29.2	C	29	54
		Intersection	Intersection					71.4	E		
11	E 134th Street & St. Ann's Avenue	NB	NBT	TR	T	110	0.41	10.9	B	44	m96
			NBR		R	100	-	-	-	-	-
		SB	SBL	LT	L	110	-	-	-	-	-
			SBT		T	50	0.38	13.8	B	42	75
		EB	EBL	LTR	L	155	-	-	-	-	-
			EBT		T	140	0.78	30.3	C	116	#205
			EBR		R	30	-	-	-	-	-
		Intersection	Intersection					20.5	C		
22	St Ann's Ave and Bruckner Blvd	NB	NBL	LTR	L	20	-	-	-	-	-
			NBT		T	95	0.50	43.0	D	118	169
			NBR		R	30	-	-	-	-	-
		SB	SBL	LTR	L	35	-	-	-	-	-
			SBT		T	20	0.29	39.6	D	58	m91
			SBR		R	25	-	-	-	-	-
		EB	EBL	LTR	L	50	-	-	-	-	-
			EBT		T	1300	0.85	22.5	C	452	577
			EBR		R	45	-	-	-	-	-
		WB	WBL	LTR	L	25	-	-	-	-	-
			WBT		T	610	0.46	11.4	B	153	181
			WBR		R	65	-	-	-	-	-
		Intersection	Intersection					21.1	C		
17	31st St & Astoria Blvd	NB	NBT	T	T	48	0.13	27.6	C	24	54
			NBR	R	R	7	0.01	4.4	A	1	5
		SB	SBT	T	T	433	0.53	76.5	E	171	260
			SBR	R	R	198	0.67	91.3	F	98	164
		EB	EBL	L	L	17	-	-	-	-	-
			EBT	T	T	402	0.52	23.3	C	125	162
			EBR	R	R	50	-	-	-	-	-
		Intersection	Intersection					54.4	D		
24	Hoyt N & 31st St	NB	NBL	L	L	21	-	-	-	-	-
			NBT	T	T	49	0.13	28.5	C	30	m52
		SB	SBT	T	T	56	0.26	37.0	D	46	76
			SBR	R	R	66	-	-	-	-	-
		WB	WBL	L	L	514	0.34	9.7	A	98	118
			WBT	T	T	1445	0.45	10.4	B	155	179
			WBR	R	R	35	0.07	7.8	A	11	22
		Intersection	Intersection					12.4	B		
3	Hoyt S & 31st St	NB	NBT	T	T	59	0.09	38.4	D	23	43
			NBR	R	R	6	-	-	-	-	-
		SB	SBL	L	L	20	-	-	-	-	-
			SBT	T	T	550	0.35	8.9	A	136	163
		EB	EBL	L	L	11	-	-	-	-	-
			EBT	T	T	1111	0.63	33.7	C	221	261
			EBR	R	R	81	0.24	29.0	C	54	88
		Intersection	Intersection					26.1	C		

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RFK Bridge Study Area - Action - LN Peak Hour											
Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	Volume	V/C	Delay	LOS	Q (50th)	Q (95th)
1	126th Street and 2nd Avenue	NW	NWL2	L	L2	5	-	-	-	-	-
			NWL		L	75	0.36	35.3	D	49	85
			NWR	R	R	535	0.40	8.1	A	85	107
		SB	SBT	TR	T	540	0.23	18.1	B	48	64
			SBR		R	17	-	-	-	-	-
		WB	WBL	L	L	20	-	-	-	-	-
			WBT	T	T	33	0.44	35.2	D	63	119
			WBR	R	R	57	-	-	-	-	-
		Intersection	Intersection					16.4	B		
2	125th Street and 2nd Avenue	SB	SBL	L	L	124	0.15	5.8	A	7	10
			SBT	TR	T	424	0.29	6.2	A	14	17
			SBR		R	17	-	-	-	-	-
		SW	SWL	L	L	187	0.66	39.1	D	100	147
			SWR	R	R	164	-	-	-	-	-
		EB	EBT	TR	T	682	0.84	41.9	D	163	#223
			EBR		R	50	-	-	-	-	-
		WB	WBL	LT	L	8	-	-	-	-	-
			WBT		T	37	0.09	26.9	C	12	25
		Intersection	Intersection					28.3	C		
11	E 134th Street & St. Ann's Avenue	NB	NBT	TR	T	100	0.21	17.0	B	53	m72
			NBR		R	20	-	-	-	-	-
		SB	SBL	LT	L	40	-	-	-	-	-
			SBT		T	50	0.18	10.9	B	23	44
		EB	EBL	LTR	L	190	-	-	-	-	-
			EBT		T	90	0.70	25.0	C	105	164
			EBR		R	35	-	-	-	-	-
		Intersection	Intersection					20.6	C		
22	St Ann's Ave and Bruckner Blvd	NB	NBL	LTR	L	10	-	-	-	-	-
			NBT		T	55	0.24	33.0	C	57	91
			NBR		R	15	-	-	-	-	-
		SB	SBL	LTR	L	30	-	-	-	-	-
			SBT		T	10	0.25	35.0	C	66	m104
			SBR		R	45	-	-	-	-	-
		EB	EBL	LTR	L	40	-	-	-	-	-
			EBT		T	1515	0.88	26.6	C	527	654
			EBR		R	10	-	-	-	-	-
		WB	WBL	LTR	L	10	-	-	-	-	-
			WBT		T	500	0.33	12.2	B	111	145
			WBR		R	25	-	-	-	-	-
		Intersection	Intersection					23.7	C		
17	31st St & Astoria Blvd	NB	NBT	T	T	24	0.07	26.8	C	13	32
			NBR	R	R	6	0.01	4.5	A	1	5
		SB	SBT	T	T	306	0.41	7.3	A	30	39
			SBR	R	R	147	0.34	8.3	A	14	22
		EB	EBL	L	L	10	-	-	-	-	-
			EBT	T	T	322	0.36	20.7	C	81	118
			EBR	R	R	17	-	-	-	-	-
		Intersection	Intersection					13.5	B		
24	Hoyt N & 31st St	NB	NBL	L	L	11	-	-	-	-	-
			NBT	T	T	24	0.05	10.5	B	3	m7
		SB	SBT	T	T	167	0.23	21.1	C	47	75
			SBR	R	R	38	-	-	-	-	-
		WB	WBL	L	L	444	0.33	42.2	D	79	107
			WBT	T	T	1065	0.41	13.1	B	112	134
			WBR	R	R	20	0.04	10.4	B	6	16
		Intersection	Intersection					21.2	C		
3	Hoyt S & 31st St	NB	NBT	T	T	29	0.04	17.4	B	4	11
			NBR	R	R	5	-	-	-	-	-
		SB	SBL	L	L	204	-	-	-	-	-
			SBT	T	T	407	0.58	31.8	C	167	206
		EB	EBL	L	L	6	-	-	-	-	-
			EBT	T	T	864	0.51	25.3	C	124	156
			EBR	R	R	46	0.14	22.3	C	22	45
		Intersection	Intersection					27.7	C		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
#: the volume for the 95th percentile cycle exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

Red Hook Study Area - With-Action - AM Peak Hour											
Intersection #	**Intersection Name**	**Approach**	**Movement**	**Lane Group**	**Movement**	**Volume**	**V/C**	**Delay**	**LOS**	**Q (50th)**	**Q (95th)**
1	Hamilton Avenue, Clinton Street & West 9th Street	EB	EBT	TR	T	113	0.43	44.8	D	94	140
			EBR		R	0	-	-	-	-	-
		NB	NBL	LT	L	260	-	-	-	-	-
			NBT		T	2407	0.64	8.0	A	117	144
		SB (at West 9th)	SBT	TR	T	1139	0.41	8.4	A	141	168
			SBR		R	83	-	-	-	-	-
		SB (at Clinton St)	SBL	L	L	255	0.29	4.7	A	31	42
			SBT	LTR	T	879	0.54	6.7	A	54	71
			SBR		R	120	-	-	-	-	-
		WB	WBL	L	L	115	0.14	54.5	D	41	59
			WBT	T	T	145	0.24	58.6	E	76	106
		Intersection						10.1	B		
2	Hamilton Avenue NB & West 9th Street	NB	NBT	T	T	2059	0.60	14.4	B	270	303
		WB	WBR	R	R	240	0.41	36.4	D	103	134
		Intersection	Intersection					17.0	B		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
#: the volume for the 95th percentile cycle exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

Red Hook Study Area - With-Action - MD Peak Hour											
Intersection #	**Intersection Name**	**Approach**	**Movement**	**Lane Group**	**Movement**	**Volume**	**V/C**	**Delay**	**LOS**	**Q (50th)**	**Q (95th)**
1	Hamilton Avenue, Clinton Street & West 9th Street	EB	EBT	TR	T	109	0.37	41.4	D	87	131
			EBR		R	0	-	-	-	-	-
		NB	NBL	LT	L	245	-	-	-	-	-
			NBT		T	2167	0.60	8.4	A	110	131
		SB (at West 9th)	SBT	TR	T	1170	0.43	9.5	A	159	188
			SBR		R	93	-	-	-	-	-
		SB (at Clinton St)	SBL	L	L	261	0.28	4.7	A	29	41
			SBT	LTR	T	905	0.57	7.2	A	60	74
			SBR		R	134	-	-	-	-	-
		WB	WBL	L	L	130	0.14	56.0	E	41	65
			WBT	T	T	115	0.16	56.4	E	57	90
		Intersection						10.4	B		
2	Hamilton Avenue NB & West 9th Street	NB	NBT	T	T	1919	0.52	10.7	B	209	236
		WB	WBR	R	R	123	0.27	38.4	D	54	78
		Intersection	Intersection					12.7	B		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
#: the volume for the 95th percentile cycle exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

Red Hook Study Area - With-Action - LN Peak Hour											
Intersection #	**Intersection Name**	**Approach**	**Movement**	**Lane Group**	**Movement**	**Volume**	**V/C**	**Delay**	**LOS**	**Q (50th)**	**Q (95th)**
1	Hamilton Avenue, Clinton Street & West 9th Street	EB	EBT	TR	T	56	0.17	37.5	D	42	74
			EBR		R	0	-	-	-	-	-
		NB	NBL	LT	L	75	-	-	-	-	-
			NBT		T	1203	0.34	8.5	A	77	85
		SB (at West 9th)	SBT	TR	T	747	0.25	7.8	A	84	103
			SBR		R	45	-	-	-	-	-
		SB (at Clinton St)	SBL	L	L	196	0.20	2.6	A	13	17
			SBT	LTR	T	551	0.29	2.5	A	18	22
			SBR		R	25	-	-	-	-	-
		WB	WBL	L	L	25	0.03	60.6	E	9	19
			WBT	T	T	50	0.07	61.7	E	24	47
		Intersection						8.3	A		
2	Hamilton Avenue NB & West 9th Street	NB	NBT	T	T	959	0.25	7.8	A	83	99
		WB	WBR	R	R	67	0.13	36.4	D	28	47
		Intersection	Intersection					10.0	A		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
#: the volume for the 95th percentile cycle exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

Upper East Side Study Area - Action - LN Peak Hour

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	Volume	V/C	Delay	LOS	Q (50th)	Q (95th)
1	E 60th Street & Queensboro Bridge Exit	NB	NBL	LTR	L	9	-	-	-	-	-
			NBT		T	79	-	-	-	-	-
			NBR		R	273	-	-	-	-	-
		EB	EBL	LT	L	0	-	-	-	-	-
			EBT		T	10	-	-	-	-	-
		Intersection	Unsignalized								
2	E 60th Street & 3rd Ave	NB	NBL	L	L	70	0.14	17.9	B	30	54
			NBT	T	T	932	0.46	20.7	C	115	144
		WB	WBT	T	T	219	0.38	16.4	B	63	178
			WBR	R	R	30	0.14	33.7	C	20	46
		Intersection	Intersection					20.0	C		
3	E 60th Street & York Ave	NB	NBT	T	T	475	0.27	18.8	B	90	110
		SB	SBT	T	T	378	0.19	18.0	B	62	84
		EB	EBL	L	L	228	0.31	29.1	C	80	122
			EBT	LT	T	0	0.33	29.4	C	80	118
			EBR	R	R	25	0.06	24.5	C	15	33
		WB	WBL	L	L	0	-	-	-	-	-
			WBT	T	T	0	-	-	-	-	-
			WBR	R	R	0	-	-	-	-	-
		Intersection	Intersection					21.0	C		
4	E 59th Street & 2nd Ave	EB	EBT	T	T	181	0.20	21.4	C	44	66
			EBR	RR2	R	120	0.65	33.6	C	125	183
			EBR2		R2	94	-	-	-	-	-
		SB	SBL2	L2	L2	227	0.16	2.4	A	7	12
			SBL	L2L	L	6	-	-	-	-	-
			SBT	T	T	741	0.35	3.1	A	16	24
		Intersection	Intersection					10.6	B		
5	E 60th Street & 2nd Ave	NWB	NWL2	L2	L2	160	0.10	15.9	B	22	33
			NWL	L	L	150	0.14	16.3	B	31	47
		SB	SBL2	L2	L2	14	-	-	-	-	-
			SBT	TR	T	809	0.35	17.0	B	93	118
			SBR		R	94	0.25	17.4	B	40	69
		WB	WBL	LT	L	5	-	-	-	-	-
			WBT	T	T	5	0.01	15.2	B	2	6
		Intersection	Intersection					16.8	B		
6	E 60th Street & 1st Ave	NB	NBT	T	T	1116	0.45	15.7	B	113	138
			NBR	TR	R	86	-	-	-	-	-
		EB	EBL	L	L	116	0.33	25.7	C	61	98
			EBT	T	T	167	0.15	15.9	B	35	53
		Intersection	Intersection					16.6	B		
7	E 60th Street & Lexington Ave	SB	SBT	T	T	743	0.63	22.6	C	176	239
			SBR	R	R	47	0.11	16.0	B	19	38
		WB	WBL	L	L	64	0.15	20.7	C	33	68
			WBT	T	T	225	0.26	21.9	C	68	93
		Intersection	Intersection					22.0	C		
8a	E 60th Street & Park Ave NB	NB	NBL	LT	L	50	-	-	-	-	-
			NBT	T	T	499	0.29	18.3	B	90	117
			WBT	T	T	237	0.34	27.0	C	85	113
			WBR	TR	R	35	-	-	-	-	-
		Intersection	Intersection					21.4	C		
8b	E 60th Street & Park Ave NB	SB	SBT	T	T	808	0.50	21.1	C	165	205
			SBR	TR	R	96	-	-	-	-	-
		WB	WBL	L	L	97	-	-	-	-	-
			WBT	T	T	190	0.36	10.9	B	25	31
		Intersection	Intersection					18.5	B		
9	E 60th Street & Madison Ave	NB	NBL	L	L	73	0.14	17.3	B	33	59
			NBT	T	T	810	0.59	16.0	B	192	248
		WB	WBT	T	T	234	0.35	18.3	B	42	52
			WBR	TR	R	52	-	-	-	-	-
		Intersection	Intersection					16.7	B		
10	E 62nd Street & Queensboro Bridge Exit	NB	NBT	T	T	1094	0.78	15.3	B	282	381
			NBR	R	R	834	0.79	20.9	C	249	#453
		EB	EBL	LT	L	7	-	-	-	-	-
			EBT	T	T	99	0.17	27.6	C	28	50
		Intersection	Intersection					17.6	B		
11	E 60th Street & 5th Ave	SB	SBT	T	T	599	0.62	10.0	B	33	40
			SBR	R	R	194	0.49	10.2	B	21	30
		WB	WBL	L	L	152	0.34	24.2	C	71	123
			WBT	T	T	155	0.19	21.3	C	35	59
		Intersection	Intersection					13.5	B		
12	E 63rd Street & York Ave	NB	NBT	T	T	166	0.40	33.8	C	120	170
			NBR	TR	R	285	0.35	6.6	A	61	92
		SB	SBL	L	L	325	0.43	22.7	C	88	144
			SBT	T	T	338	0.40	18.3	B	101	117
			SBR	TR	R	49	-	-	-	-	-
		WB	WBL	L	L	234	0.40	36.3	D	114	187
			WBT	LT	T	228	0.40	34.5	C	117	164
			WBR	TR	R	21	-	-	-	-	-
		Intersection	Intersection					23.2	C		
13	E 53rd Street & FDR Drive	SB	SBR	R	R	131	-	-	-	-	-
		SWB	SWR	R	R	315	-	-	-	-	-
		Intersection	Unsignalized								
14	E 61st Street & 5th Ave	SB	SBT	T	T	734	0.44	20.1	C	114	148
		WB	WBL	L	L	59	0.06	16.9	B	12	23
		Intersection	Intersection					19.9	B		
15	E 65th Street & 5th Ave	SB	SBL	LT	L	69	-	-	-	-	-
			SBT	T	T	668	0.43	6.6	A	33	39
		EB	EBT	T	T	646	0.72	32.7	C	177	242
			EBR	R	R	198	0.56	32.1	C	113	171
		Intersection	Intersection					19.9	B		
16	E 66th Street & 5th Avenue	SB	SBT	T	T	682	0.52	17.5	B	141	180
			SBR	TR	R	242	-	-	-	-	-
		WB	WBL	LT	L	55	-	-	-	-	-
			WBT	T	T	439	0.56	28.6	C	138	189
		Intersection	Intersection					21.4	C		
17	E 79th Street & 5th Ave	SB	SBL	LT	L	56	-	-	-	-	-
			SBT	T	T	576	0.52	24.5	C	127	167
			SBR	TR	R	64	-	-	-	-	-
		EB	EBT	T	T	336	0.53	33.5	C	96	142
			EBR	R	R	105	0.36	32.6	C	57	104
		WB	WBL	L	L	50	0.51	55.2	E	35	68
			WBT	T	T	353	0.36	22.1	C	83	122
		Intersection	Intersection					27.5	C		
18	E 71st Street & York Ave	NB	NBL	LT	L	9	-	-	-	-	-
			NBT	T	T	151	0.14	17.5	B	40	61
			NBR	TR	R	0	-	-	-	-	-
		SB	SBL	LT	L	0	-	-	-	-	-
			SBT	LTR	T	224	0.23	18.6	B	66	95
			SBR	TR	R	31	-	-	-	-	-
		WB	WBL	L	L	76	0.19	26.5	C	49	79
			WBT	TR	T	176	0.53	33.3	C	176	243
			WBR		R	76	-	-	-	-	-
		Intersection	Intersection					24.3	C		

~: the approach is above capacity for the 50th percentile traffic , queue can be longer
#: the volume for the 95th percentile cycle exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

CENTRAL BUSINESS DISTRICT (CBD) TOLLING PROGRAM

Appendix 4B.6, Traffic Highway Capacity Software Files

2024

	AM Peak Hour				
	Performance Measures	Existing Condition	No Action Alternative	With Action Alternative adopted toll structure	Incremental Change
	Hourly Volume				
Northbound	Bayonne	1,075	1,091	1,370	279
	RFK	4,452	4,575	5,108	533
	Eastern Spur I-95 (Pre-ramp)	152	152	204	52
	Merge from 495	641	660	658	-2
	Eastern Spur I-95 (Post-ramp)	793	811	862	50
Southbound	Bayonne	659	678	752	74
	RFK	4,951	5,127	5,548	421
	Eastern Spur I-95 (Pre-ramp)	1,063	1,145	1,154	8
	Diverge to 495	630	627	657	30
	Eastern Spur I-95 (Post-ramp)	433	519	497	-22
	Density (pc/mi/ln)				
Northbound	Bayonne	15.4	15.6	19.2	3.6
	RFK	31.1	32.0	35.7	3.7
	Eastern Spur I-95 (Pre-ramp)	1.4	1.4	1.8	0.4
	Merge from 495	8.2	8.4	8.6	0.2
	Eastern Spur I-95 (Post-ramp)	6.5	6.7	7.0	0.3
Southbound	Bayonne	10.5	10.8	11.7	0.9
	RFK	34.4	35.6	38.5	2.9
	Eastern Spur I-95 (Pre-ramp)	8.6	9.3	9.2	-0.1
	Diverge to 495	8.1	8.7	8.7	0.0
	Eastern Spur I-95 (Post-ramp)	3.4	4.1	3.9	-0.2
	Level of Service (LOS)				
Northbound	Bayonne	B	B	C	-
	RFK	D	D	E	-
	Eastern Spur I-95 (Pre-ramp)	A	A	A	-
	Merge from 495	A	A	A	-
	Eastern Spur I-95 (Post-ramp)	A	A	A	-
Southbound	Bayonne	A	A	B	-
	RFK	D	E	E	-
	Eastern Spur I-95 (Pre-ramp)	A	A	A	-
	Diverge to 495	A	A	A	-
	Eastern Spur I-95 (Post-ramp)	A	A	A	-

	MD Peak Hour				
	Performance Measures	Existing Condition	No Action Alternative	With Action Alternative adopted toll structure	Incremental Change
	Hourly Volume				
Northbound	Bayonne	459	434	695	261
	RFK	4,325	4,381	4,656	275
	Eastern Spur I-95 (Pre-ramp)	225	195	263	68
	Merge from 495	572	569	594	25
	Eastern Spur I-95 (Post-ramp)	798	764	857	93
Southbound	Bayonne	592	585	690	105
	RFK	3,430	3,551	4,106	555
	Eastern Spur I-95 (Pre-ramp)	637	629	797	168
	Diverge to 495	596	586	623	37
	Eastern Spur I-95 (Post-ramp)	40	43	174	131
	Density (pc/mi/ln)				
Northbound	Bayonne	7.4	7.0	10.5	3.5
	RFK	30.4	30.8	33.3	2.5
	Eastern Spur I-95 (Pre-ramp)	1.9	1.7	2.3	0.6
	Merge from 495	8.3	8.1	8.5	0.4
	Eastern Spur I-95 (Post-ramp)	6.8	6.5	7.1	0.6
Southbound	Bayonne	9.8	9.6	11.0	1.4
	RFK	24.7	25.6	29.4	3.8
	Eastern Spur I-95 (Pre-ramp)	5.4	5.3	6.6	1.3
	Diverge to 495	5.1	5.0	6.2	1.2
	Eastern Spur I-95 (Post-ramp)	0.4	0.4	1.3	0.9
	Level of Service (LOS)				
Northbound	Bayonne	A	A	A	-
	RFK	D	D	D	-
	Eastern Spur I-95 (Pre-ramp)	A	A	A	-
	Merge from 495	A	A	A	-
	Eastern Spur I-95 (Post-ramp)	A	A	A	-
Southbound	Bayonne	A	A	A	-
	RFK	C	C	D	-
	Eastern Spur I-95 (Pre-ramp)	A	A	A	-
	Diverge to 495	A	A	A	-
	Eastern Spur I-95 (Post-ramp)	A	A	A	-

	PM Peak Hour				
	Performance Measures	Existing Condition	No Action Alternative	With Action Alternative adopted toll structure	Incremental Change
	Hourly Volume				
Northbound	Bayonne	563	570	735	165
	RFK	4,710	4,704	5,251	548
	Eastern Spur I-95 (Pre-ramp)	418	436	498	62
	Merge from 495	805	805	852	47
	Eastern Spur I-95 (Post-ramp)	1,223	1,241	1,350	109
Southbound	Bayonne	791	814	984	170
	RFK	4,159	4,344	4,974	629
	Eastern Spur I-95 (Pre-ramp)	801	792	827	35
	Diverge to 495	761	755	786	31
	Eastern Spur I-95 (Post-ramp)	40	37	41	4
	Density (pc/mi/ln)				
Northbound	Bayonne	7.8	7.9	10.0	2.1
	RFK	31.3	31.2	35.1	3.9
	Eastern Spur I-95 (Pre-ramp)	3.1	3.2	3.7	0.5
	Merge from 495	10.4	10.5	11.1	0.6
	Eastern Spur I-95 (Post-ramp)	9.1	9.2	10.0	0.8
Southbound	Bayonne	11.2	11.6	13.7	2.1
	RFK	27.9	29.1	33.3	4.2
	Eastern Spur I-95 (Pre-ramp)	5.9	5.9	6.2	0.3
	Diverge to 495	5.6	5.5	5.8	0.3
	Eastern Spur I-95 (Post-ramp)	0.3	0.3	0.3	0.0
	Level of Service (LOS)				
Northbound	Bayonne	A	A	A	-
	RFK	D	D	E	-
	Eastern Spur I-95 (Pre-ramp)	A	A	A	-
	Merge from 495	A	A	B	-
	Eastern Spur I-95 (Post-ramp)	A	A	A	-
Southbound	Bayonne	B	B	B	-
	RFK	D	D	D	-
	Eastern Spur I-95 (Pre-ramp)	A	A	A	-
	Diverge to 495	A	A	A	-
	Eastern Spur I-95 (Post-ramp)	A	A	A	-

	LN Peak Hour				
	Performance Measures	Existing Condition	No Action Alternative	With Action Alternative adopted toll structure	Incremental Change
	Hourly Volume				
Northbound	Bayonne	173	175	185	10
	RFK	847	866	935	69
	Eastern Spur I-95 (Pre-ramp)	15	16	14	-2
	Merge from 495	341	343	349	6
	Eastern Spur I-95 (Post-ramp)	356	360	363	4
Southbound	Bayonne	207	207	223	16
	RFK	833	847	1,455	607
	Eastern Spur I-95 (Pre-ramp)	347	354	364	10
	Diverge to 495	334	340	351	11
	Eastern Spur I-95 (Post-ramp)	13	14	12	-1
	Density (pc/mi/ln)				
Northbound	Bayonne	2.6	2.6	2.7	0.1
	RFK	6.1	6.1	6.8	0.7
	Eastern Spur I-95 (Pre-ramp)	0.1	0.2	0.1	-0.1
	Merge from 495	4.5	4.5	4.5	0.0
	Eastern Spur I-95 (Post-ramp)	2.8	2.8	2.8	0.0
Southbound	Bayonne	3.3	3.3	3.5	0.2
	RFK	5.9	6.3	10.0	3.7
	Eastern Spur I-95 (Pre-ramp)	2.7	2.7	2.8	0.1
	Diverge to 495	2.5	2.6	2.6	0.0
	Eastern Spur I-95 (Post-ramp)	0.1	0.1	0.1	0.0
	Level of Service (LOS)				
Northbound	Bayonne	A	A	A	-
	RFK	A	A	A	-
	Eastern Spur I-95 (Pre-ramp)	A	A	A	-
	Merge from 495	A	A	A	-
	Eastern Spur I-95 (Post-ramp)	A	A	A	-
Southbound	Bayonne	A	A	A	-
	RFK	A	A	A	-
	Eastern Spur I-95 (Pre-ramp)	A	A	A	-
	Diverge to 495	A	A	A	-
	Eastern Spur I-95 (Post-ramp)	A	A	A	-

HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	AM
Project Description	Bayonne NB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.00		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		5280	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.909	1603	4400	0.36	41.8	19.2	C

Facility Analysis Results

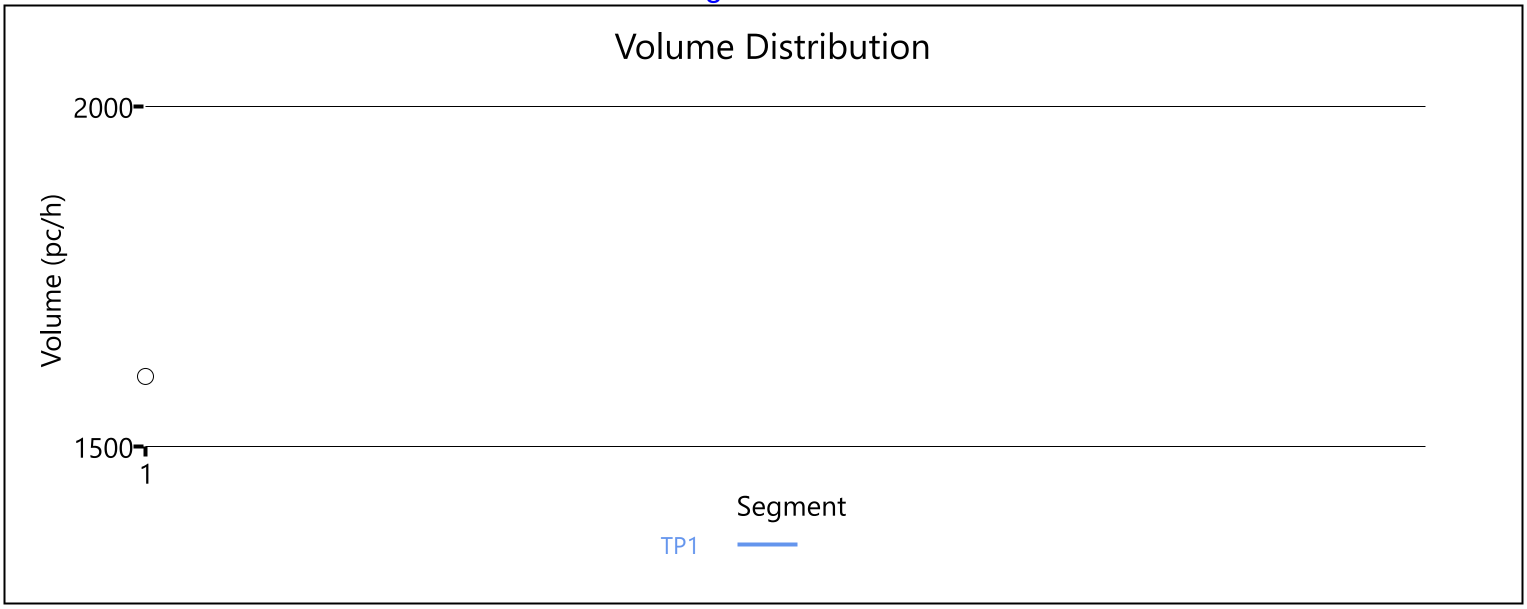
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	19.2	17.5	1.40	C

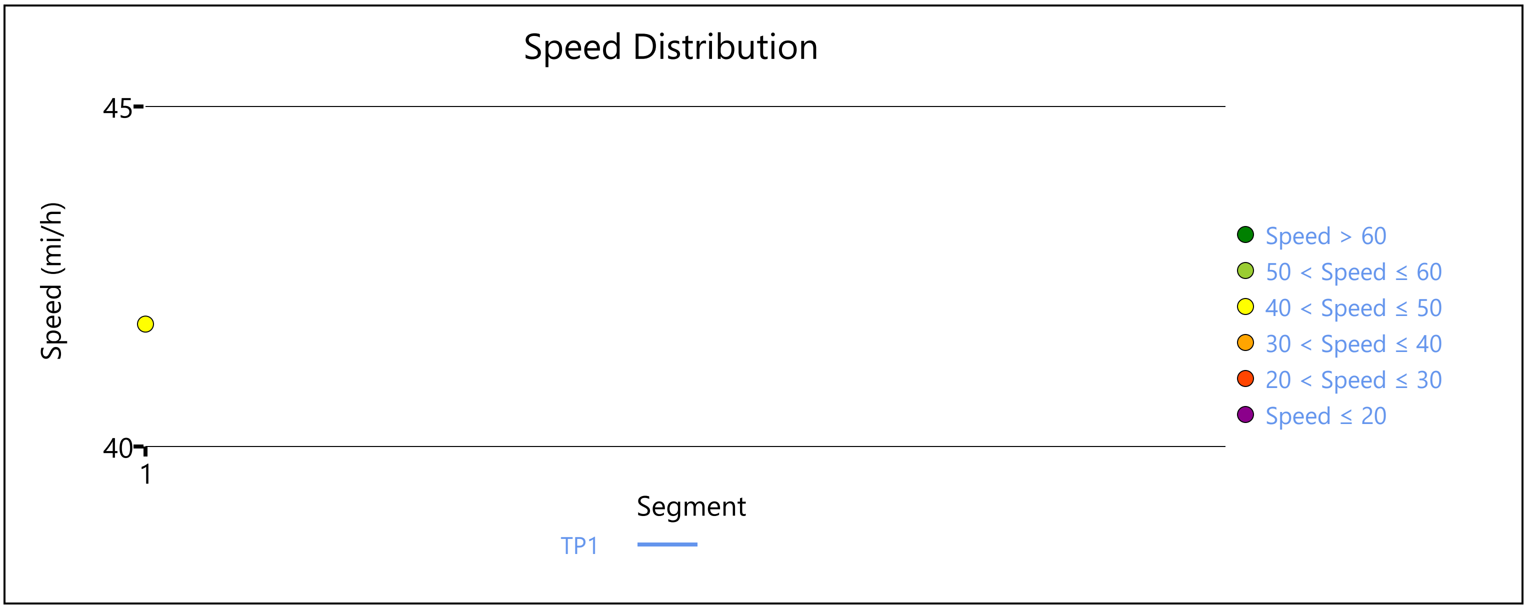
Facility Overall Results

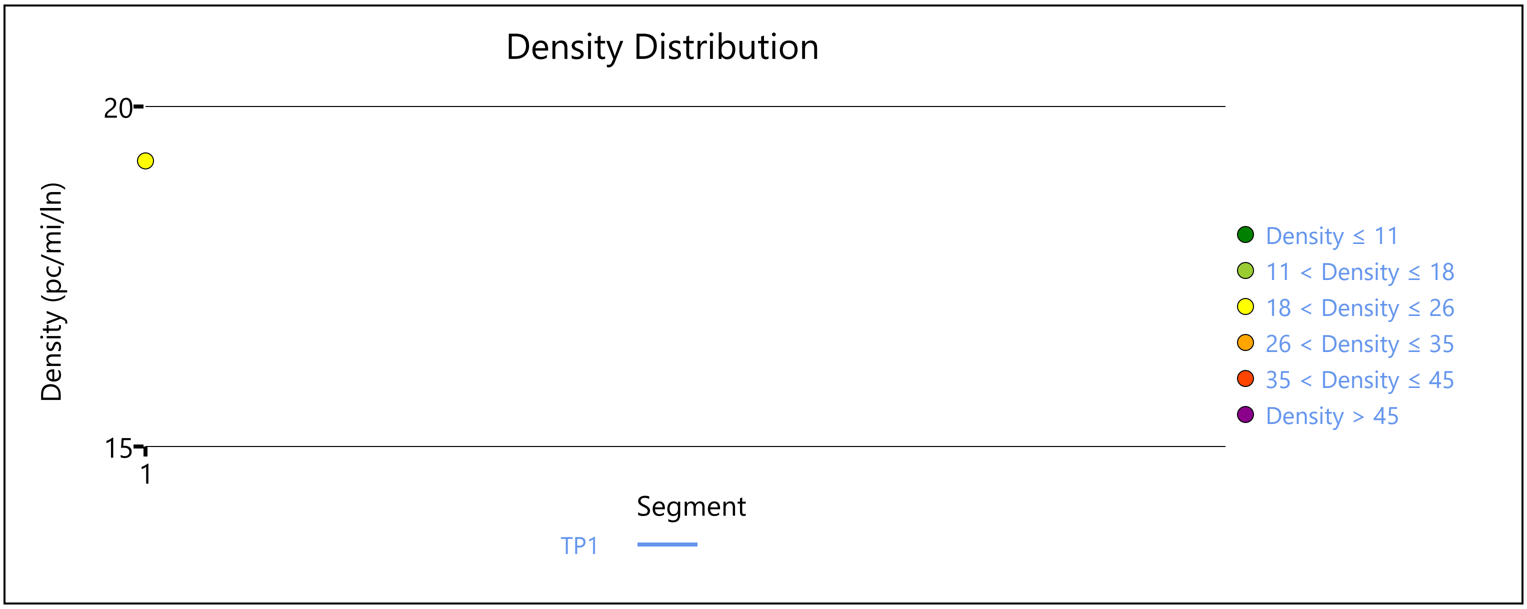
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	17.5
Average Travel Time, min	1.40	Density, pc/mi/ln	19.2

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	AM
Project Description	Bayonne SB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.00		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		5280	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.817	979	4400	0.22	41.8	11.7	B

Facility Analysis Results

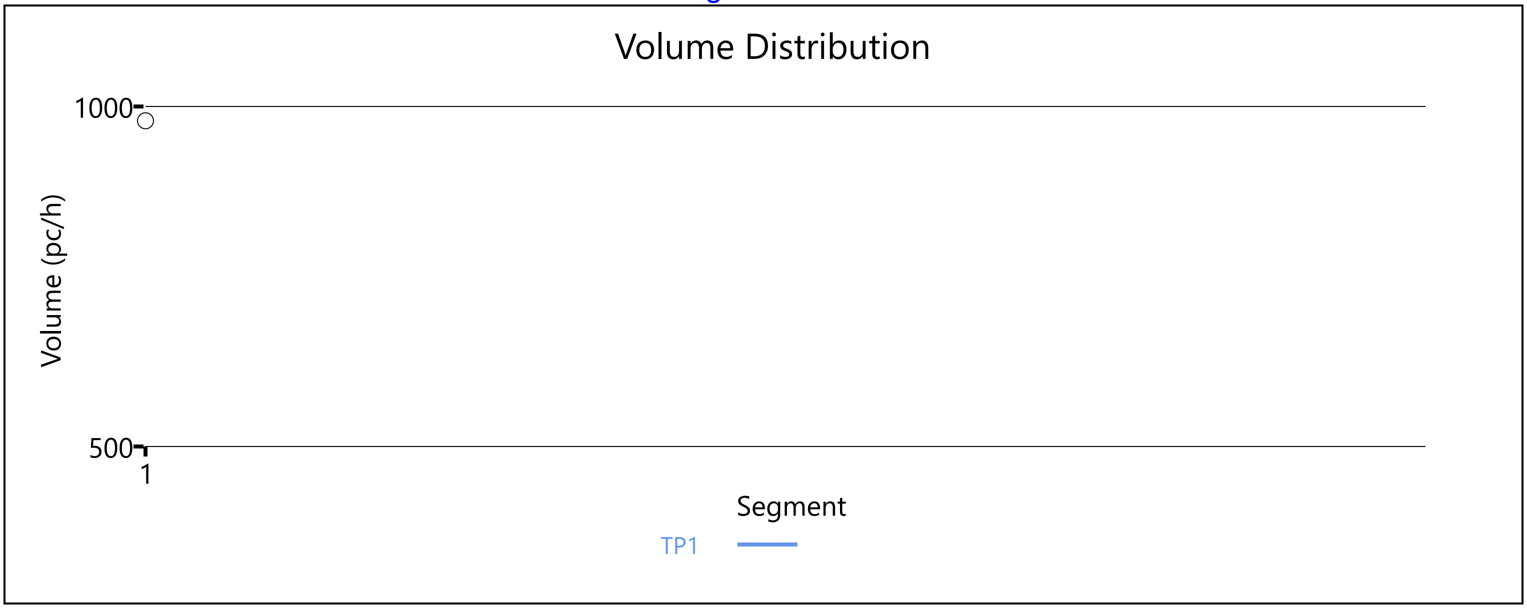
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	11.7	9.6	1.40	B

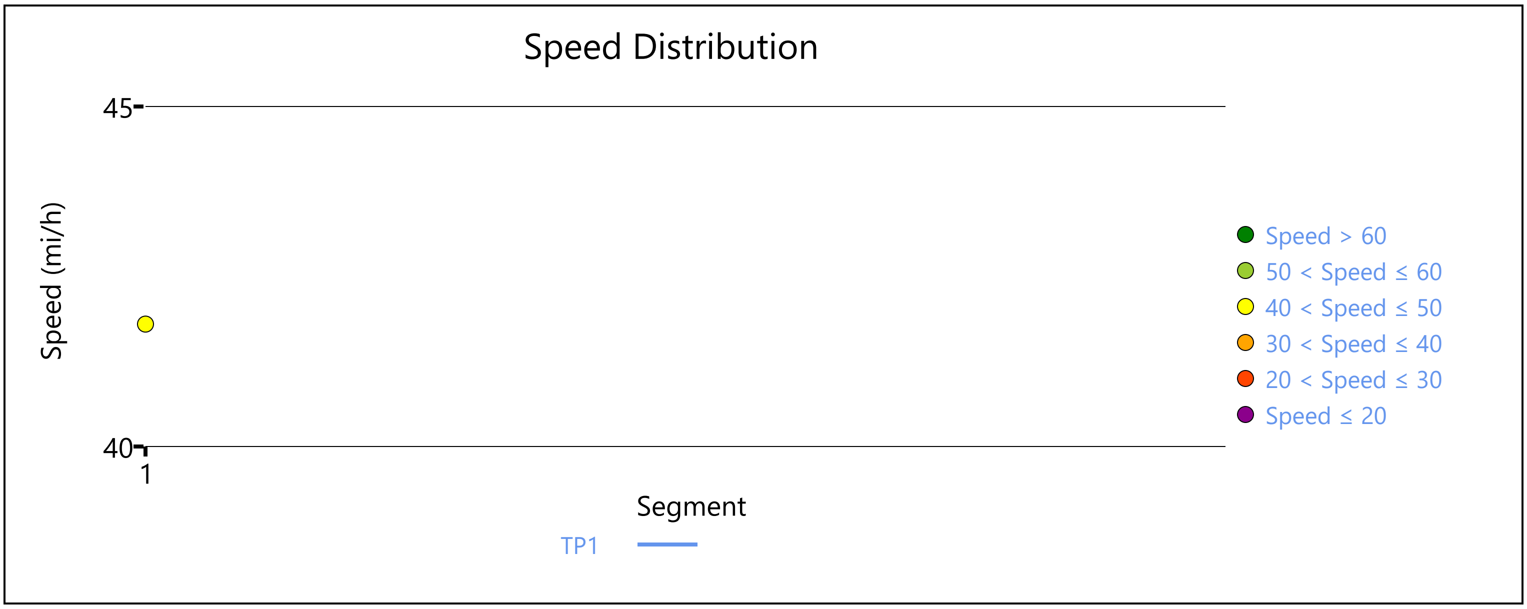
Facility Overall Results

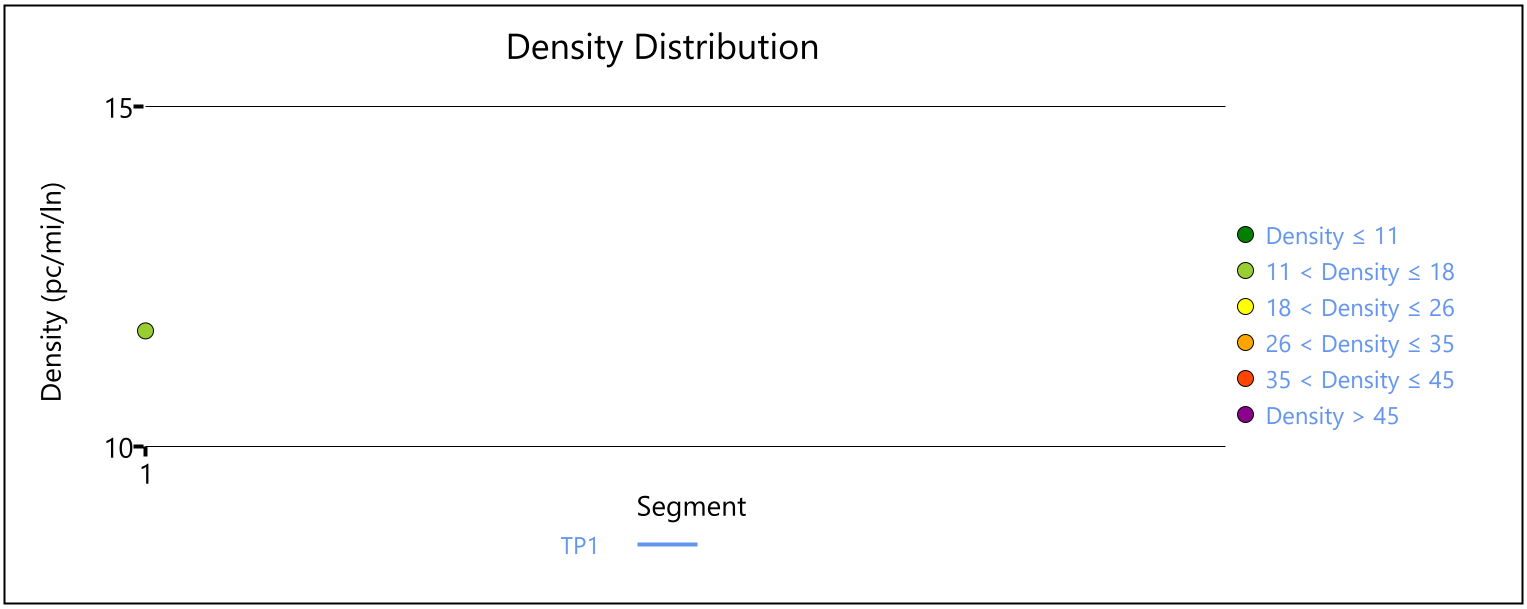
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	9.6
Average Travel Time, min	1.40	Density, pc/mi/ln	11.7

Messages

Comments


Volume Distribution
1000
500
1
Volume (pc/h)
Segment
TP1


Speed Distribution
45
40
1
Speed (mi/h)
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
15
10
1
Density (pc/mi/ln)
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	MD
Project Description	Bayonne NB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.00		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		5280	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.846	874	4400	0.20	41.8	10.5	A

Facility Analysis Results

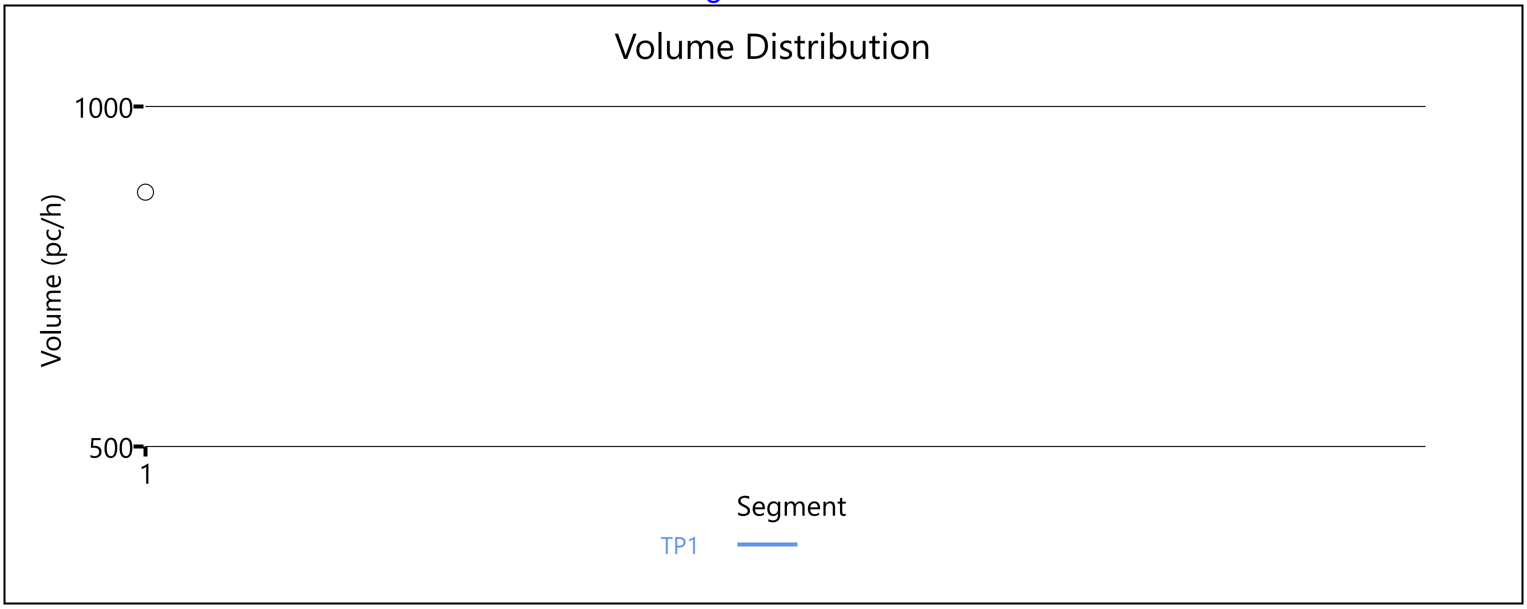
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	10.5	8.9	1.40	A

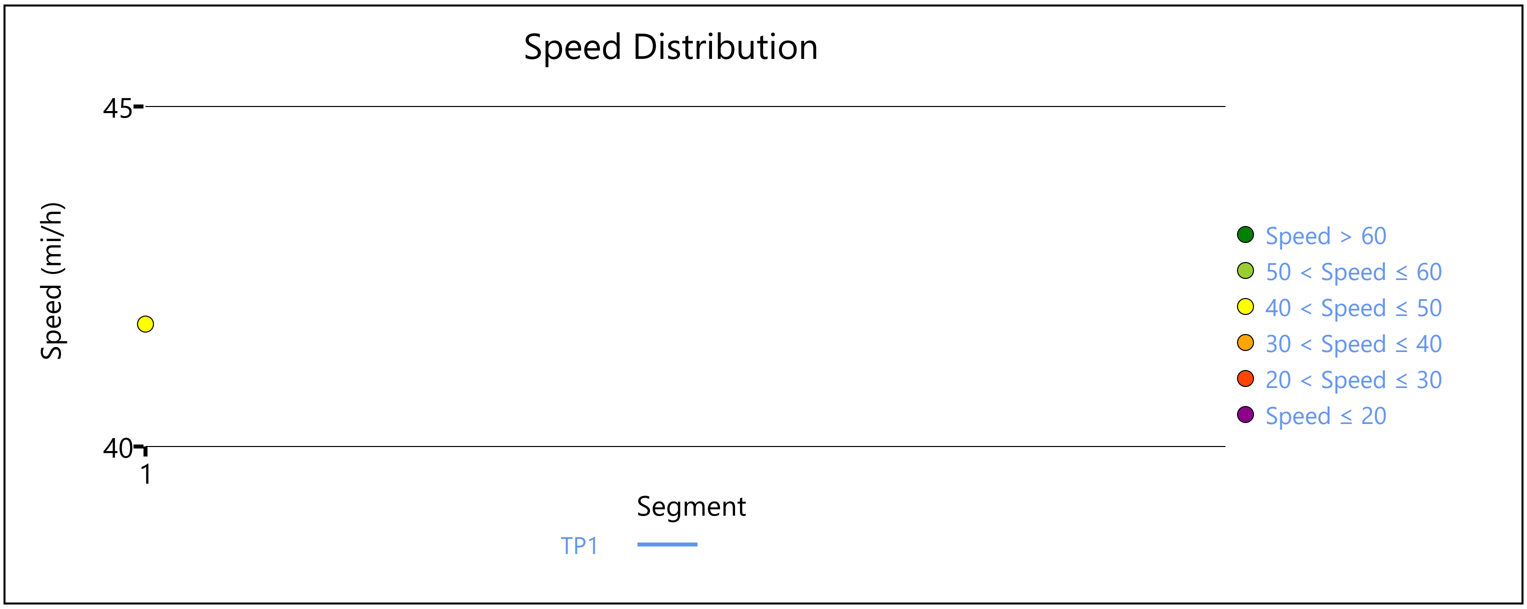
Facility Overall Results

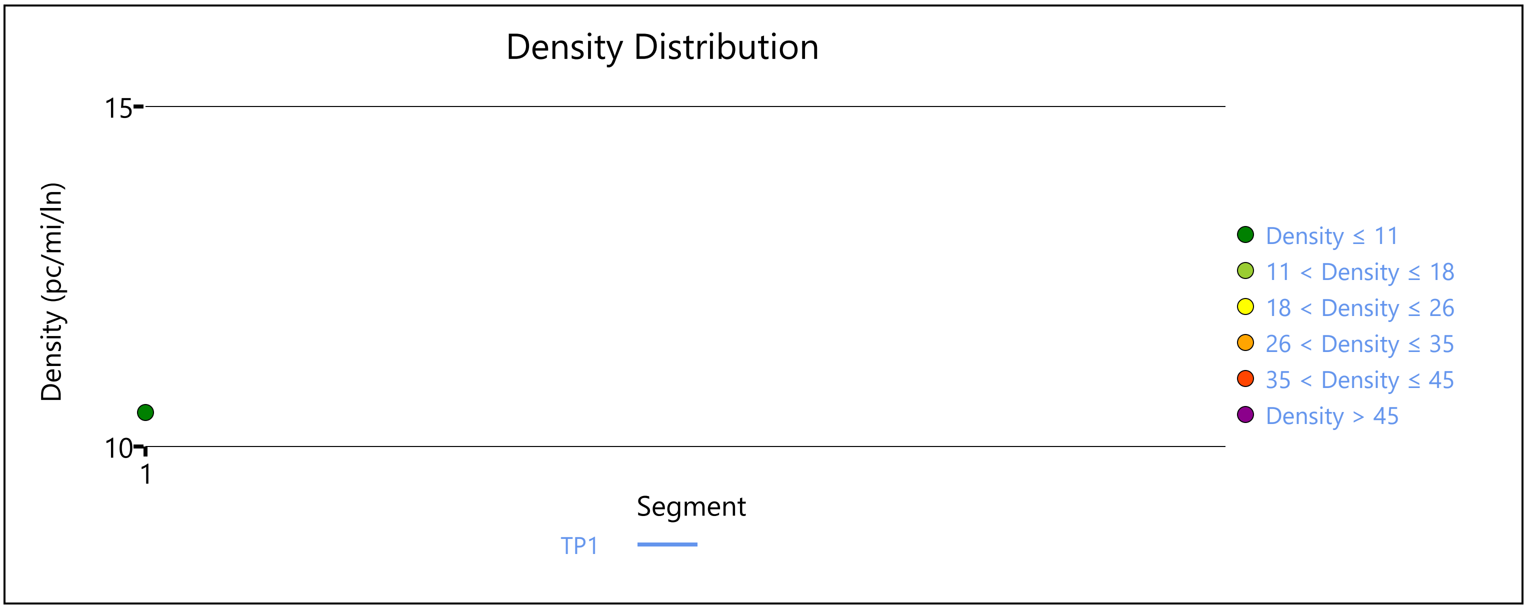
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	8.9
Average Travel Time, min	1.40	Density, pc/mi/ln	10.5

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	MD
Project Description	Bayonne SB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.00		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		5280	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.797	921	4400	0.21	41.8	11.0	A

Facility Analysis Results

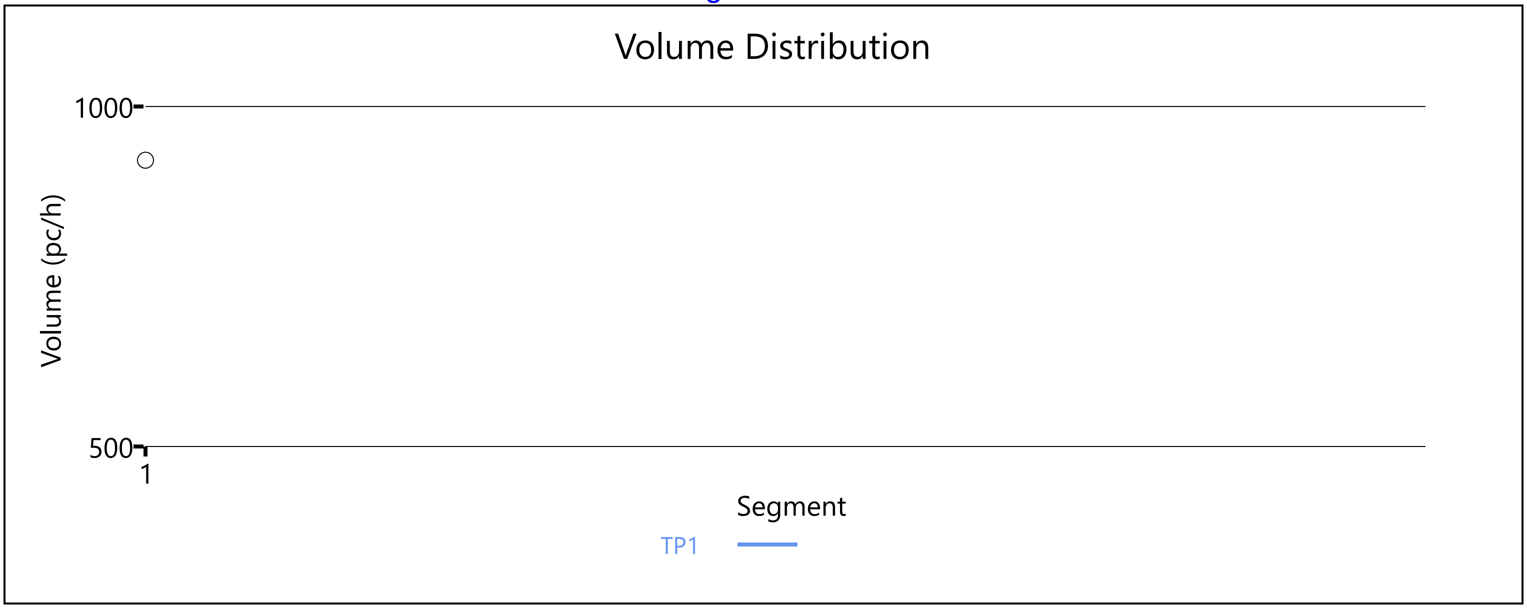
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	11.0	8.8	1.40	A

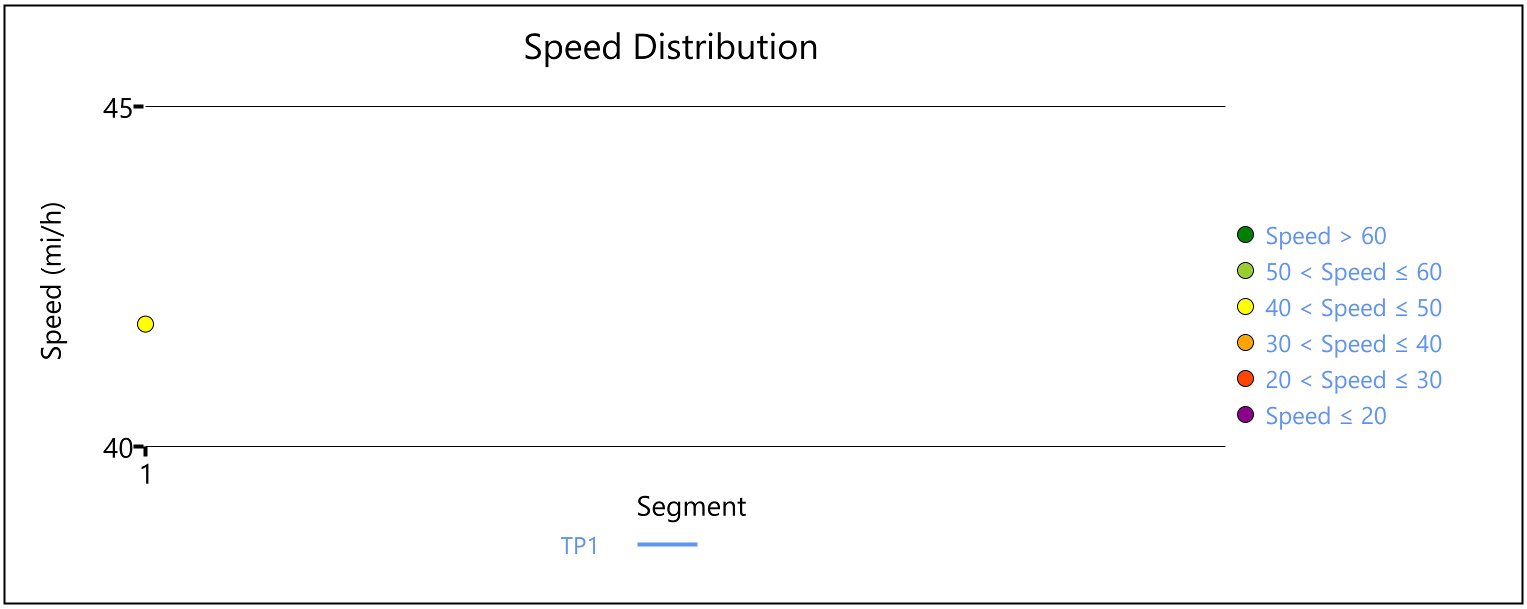
Facility Overall Results

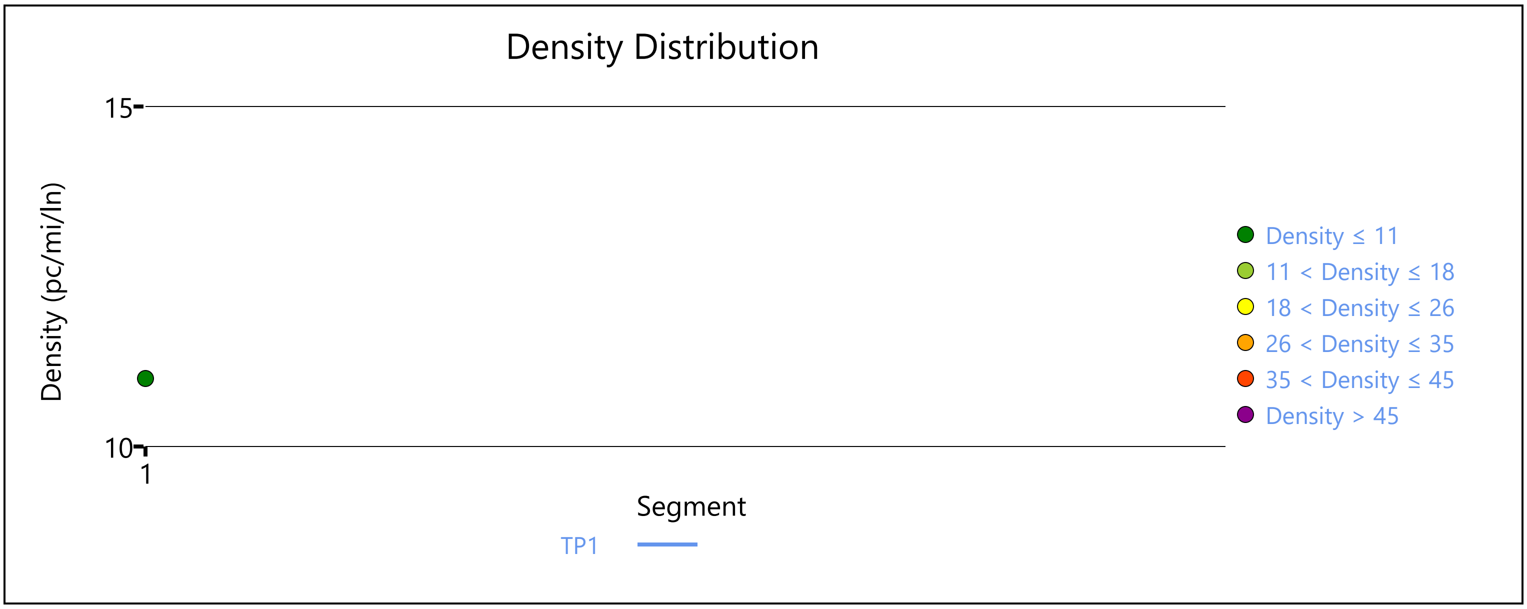
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	8.8
Average Travel Time, min	1.40	Density, pc/mi/ln	11.0

Messages

Comments







 HCS™ Freeways Version 7.9.5 Generated: 04/09/2024 09:34:46

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HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	PM
Project Description	Bayonne NB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.00		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		5280	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.933	838	4400	0.19	41.8	10.0	A

Facility Analysis Results

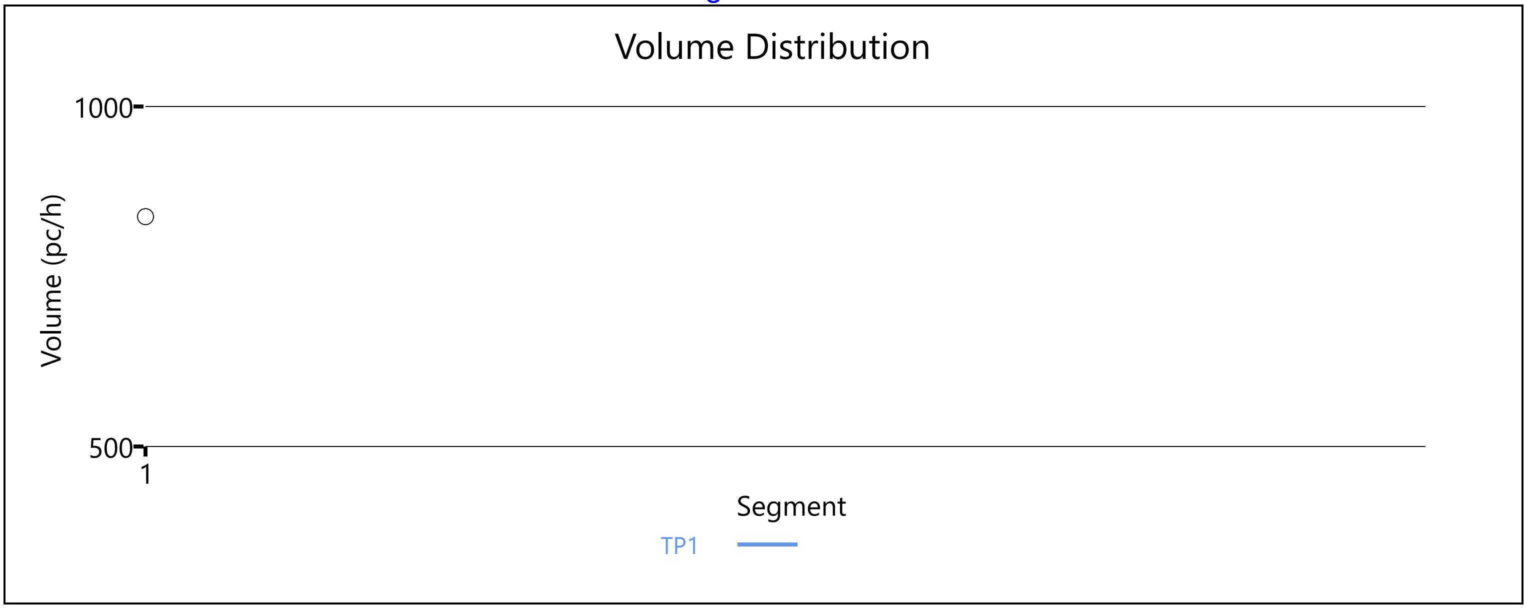
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	10.0	9.3	1.40	A

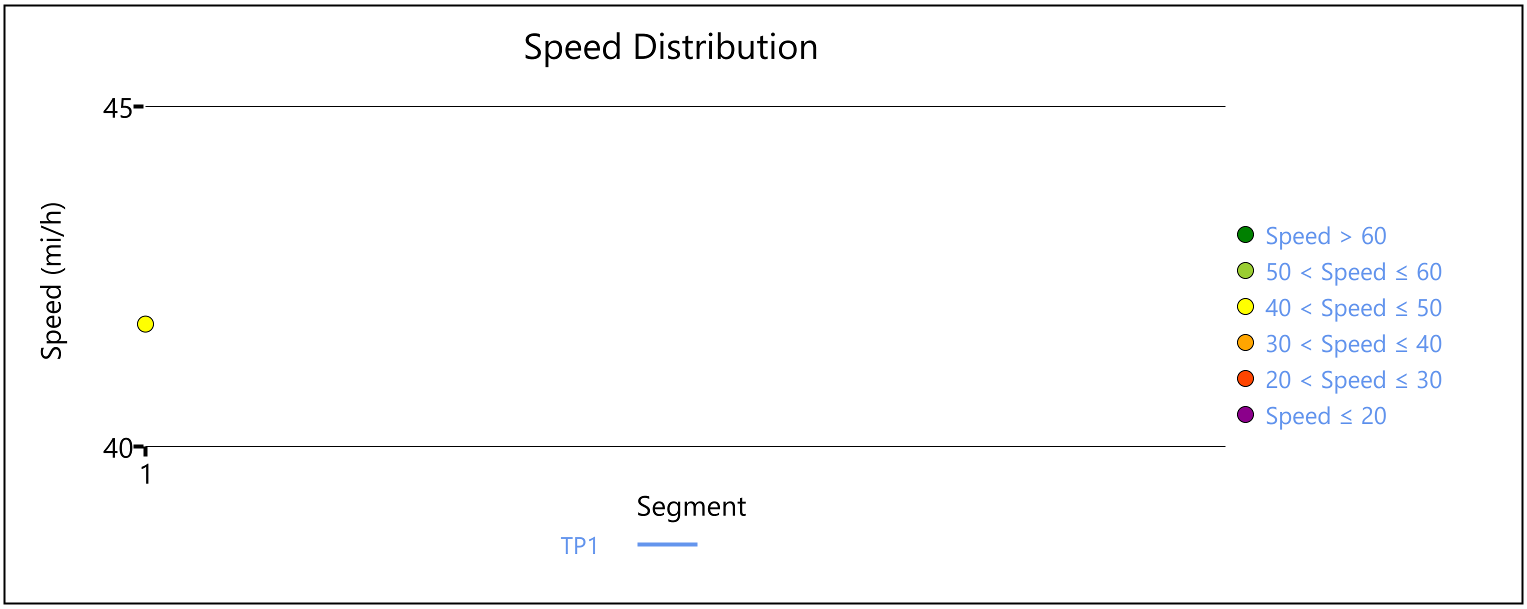
Facility Overall Results

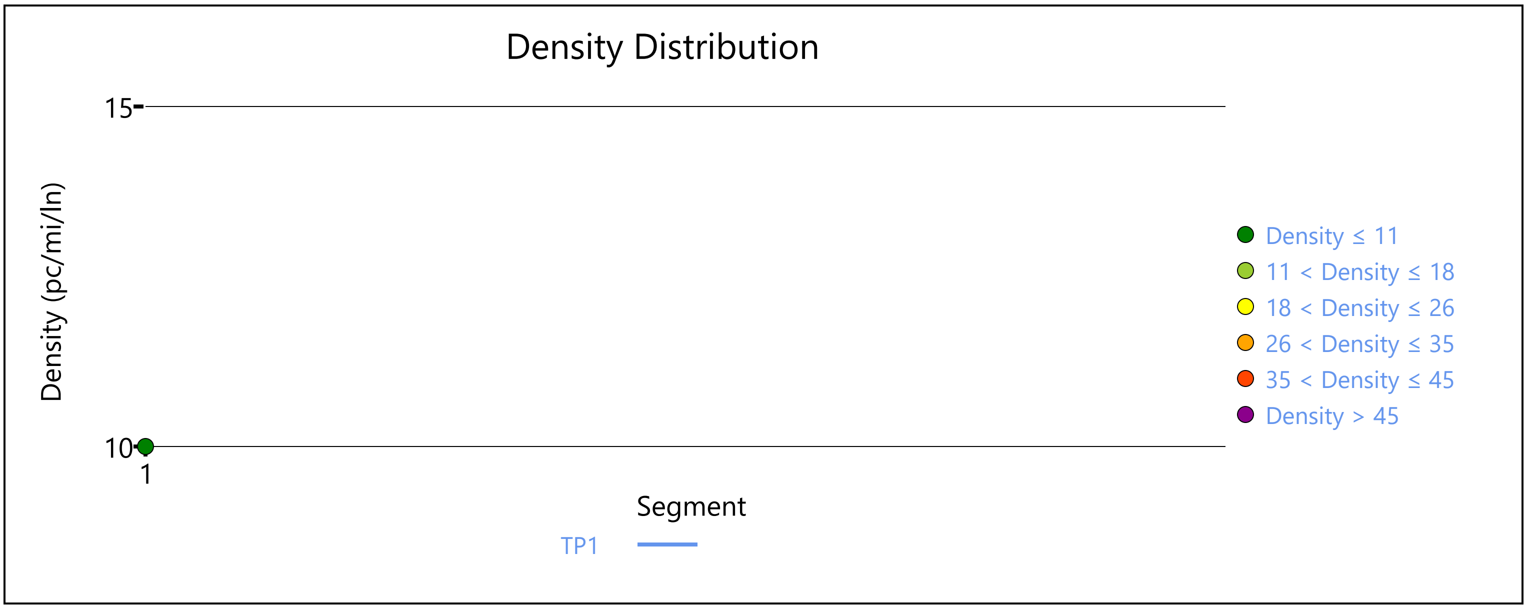
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	9.3
Average Travel Time, min	1.40	Density, pc/mi/ln	10.0

Messages

Comments


Volume Distribution
1000
500
Volume (pc/h)
1
Segment
TP1


Speed Distribution
45
40
Speed (mi/h)
1
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
15
10
Density (pc/mi/ln)
1
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	PM
Project Description	Bayonne SB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.00		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		5280	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.912	1148	4400	0.26	41.8	13.7	B

Facility Analysis Results

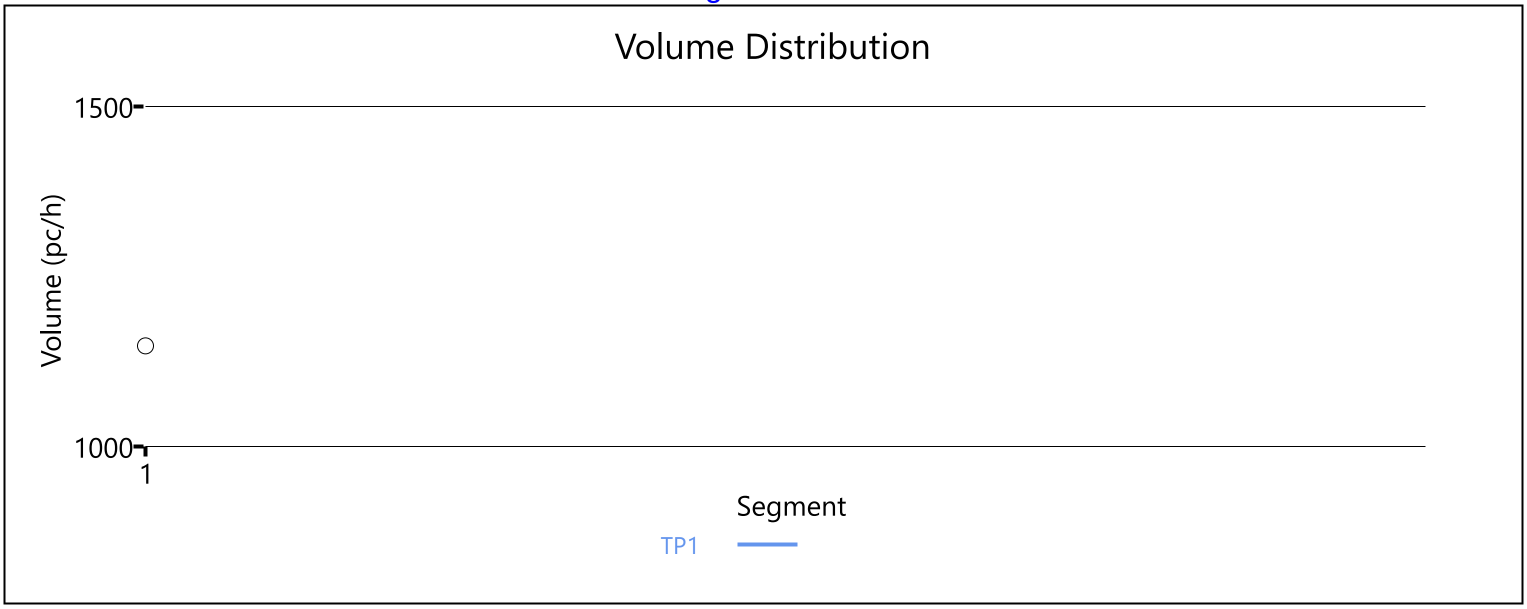
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	13.7	12.5	1.40	B

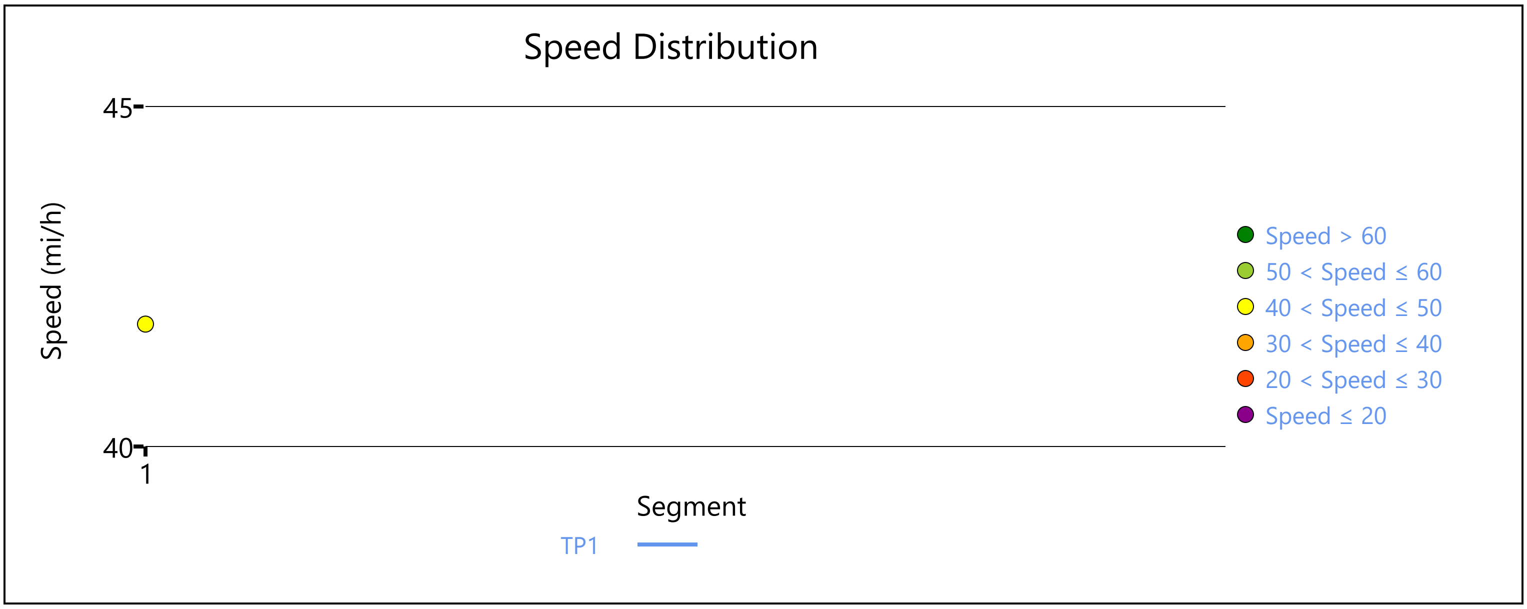
Facility Overall Results

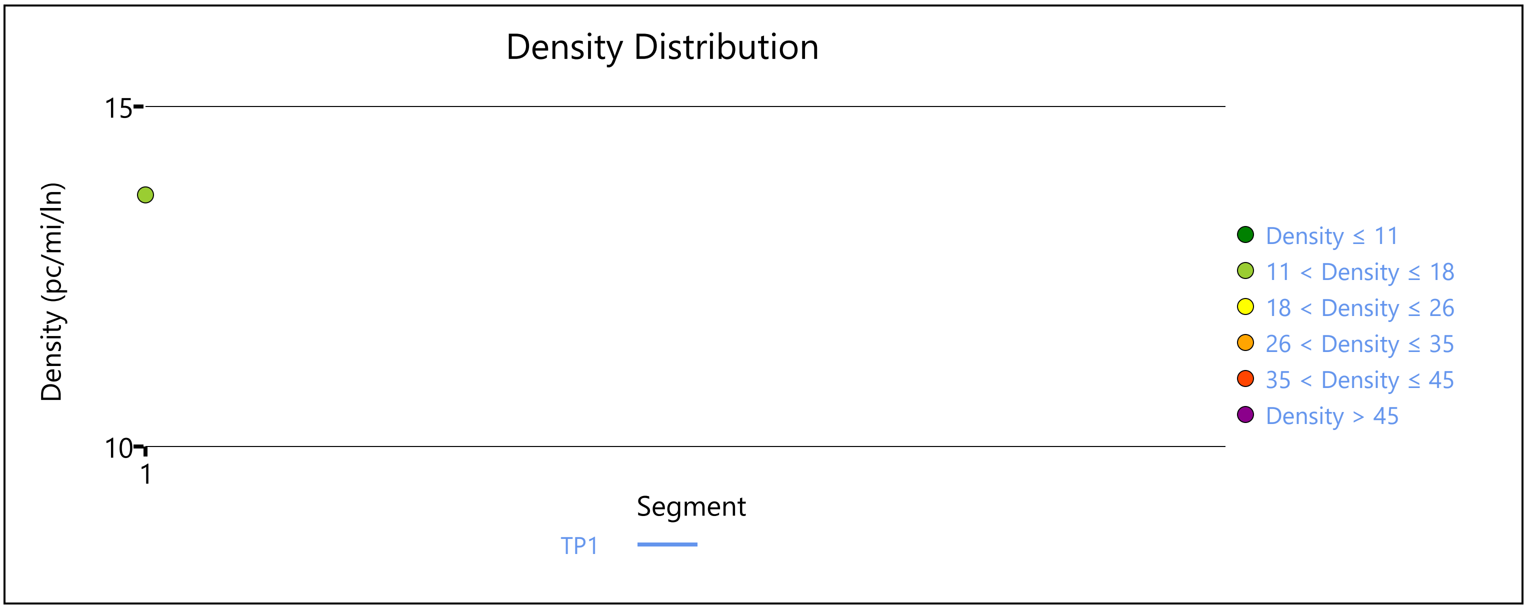
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	12.5
Average Travel Time, min	1.40	Density, pc/mi/ln	13.7

Messages

Comments







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HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	LN
Project Description	Bayonne NB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.00		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		5280	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.865	228	4400	0.05	41.8	2.7	A

Facility Analysis Results

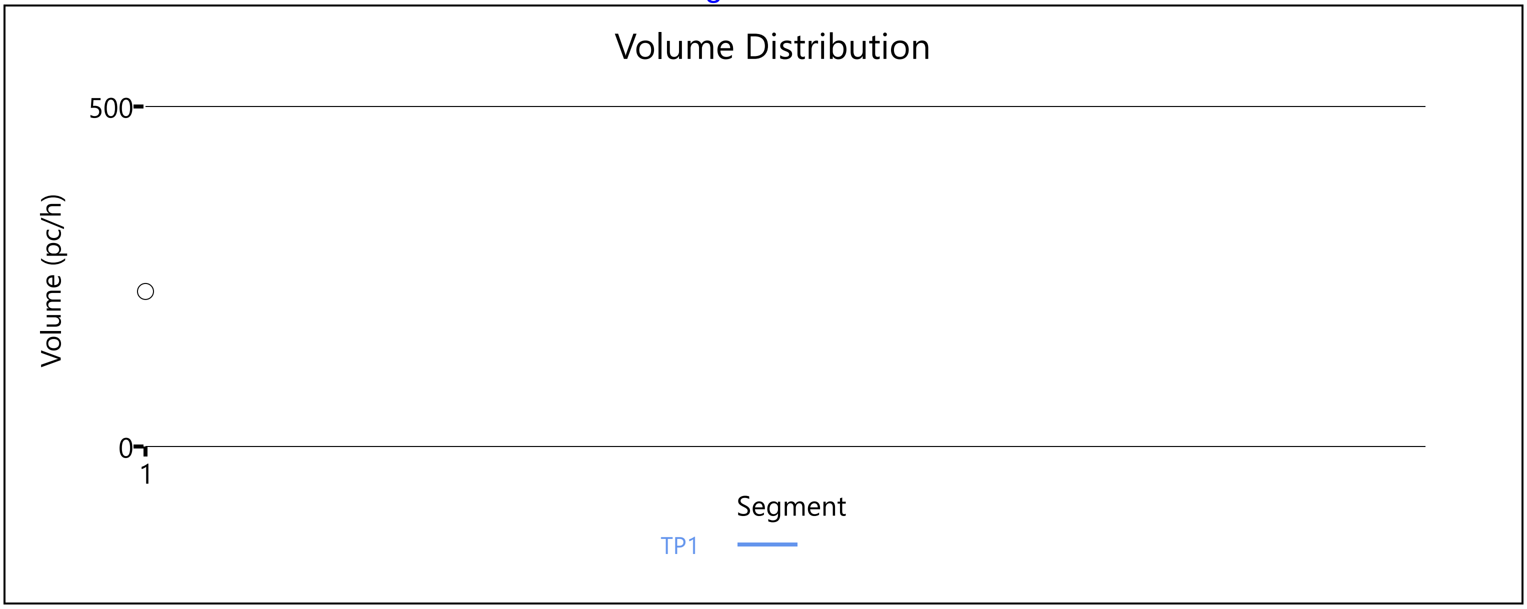
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	2.7	2.3	1.40	A

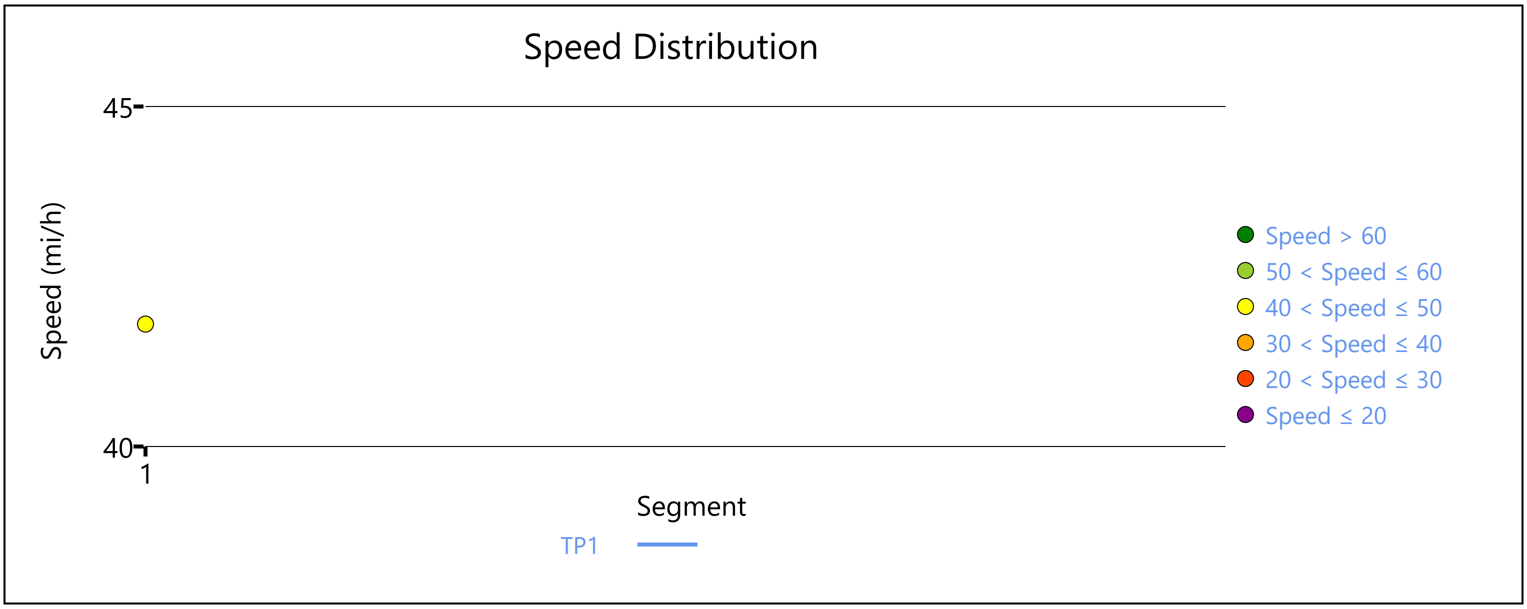
Facility Overall Results

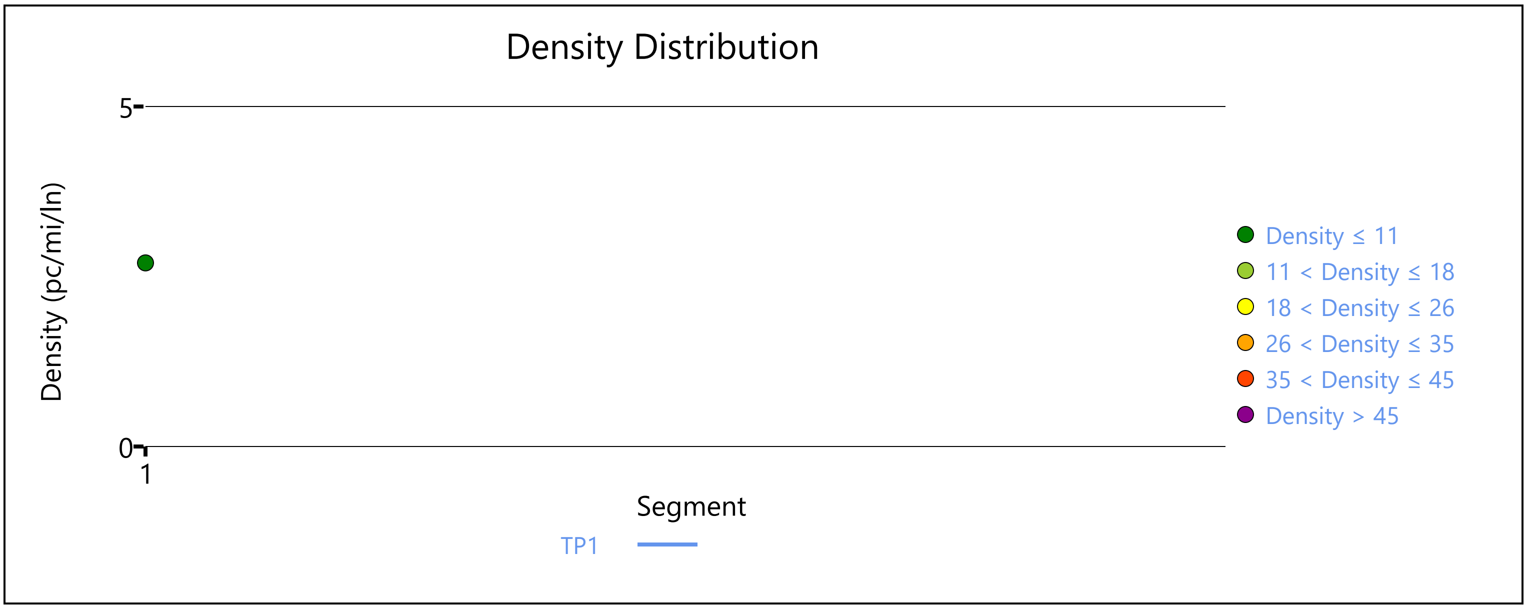
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	2.3
Average Travel Time, min	1.40	Density, pc/mi/ln	2.7

Messages

Comments


Volume Distribution
500
0
1
Volume (pc/h)
Segment
TP1


Speed Distribution
45
40
1
Speed (mi/h)
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
5
0
1
Density (pc/mi/ln)
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	LN
Project Description	Bayonne SB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.00		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		5280	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.809	293	4400	0.07	41.8	3.5	A

Facility Analysis Results

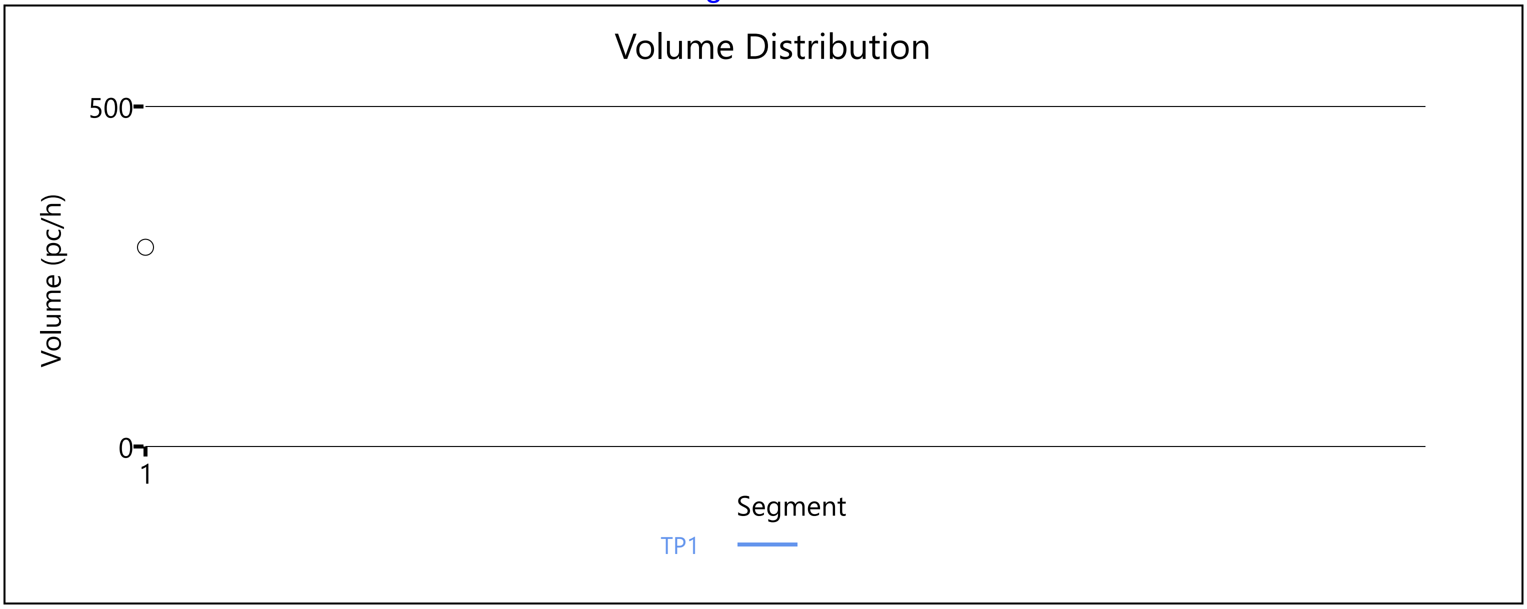
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	3.5	2.8	1.40	A

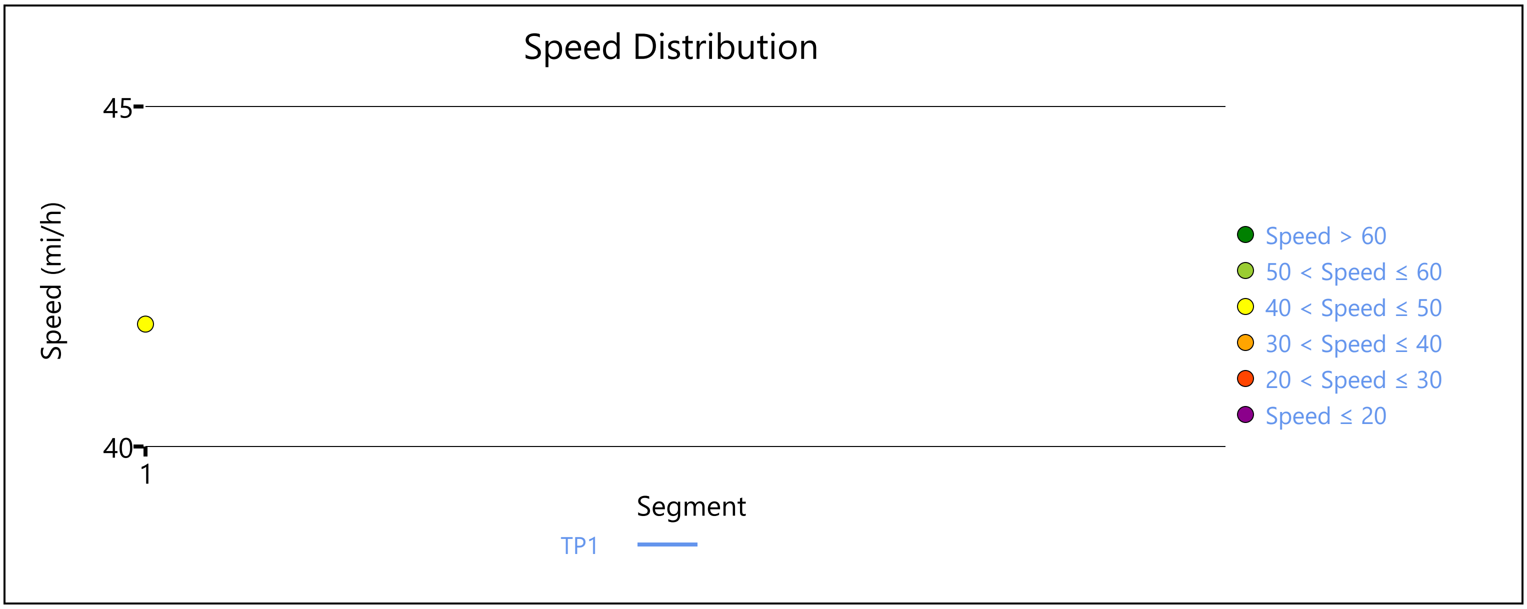
Facility Overall Results

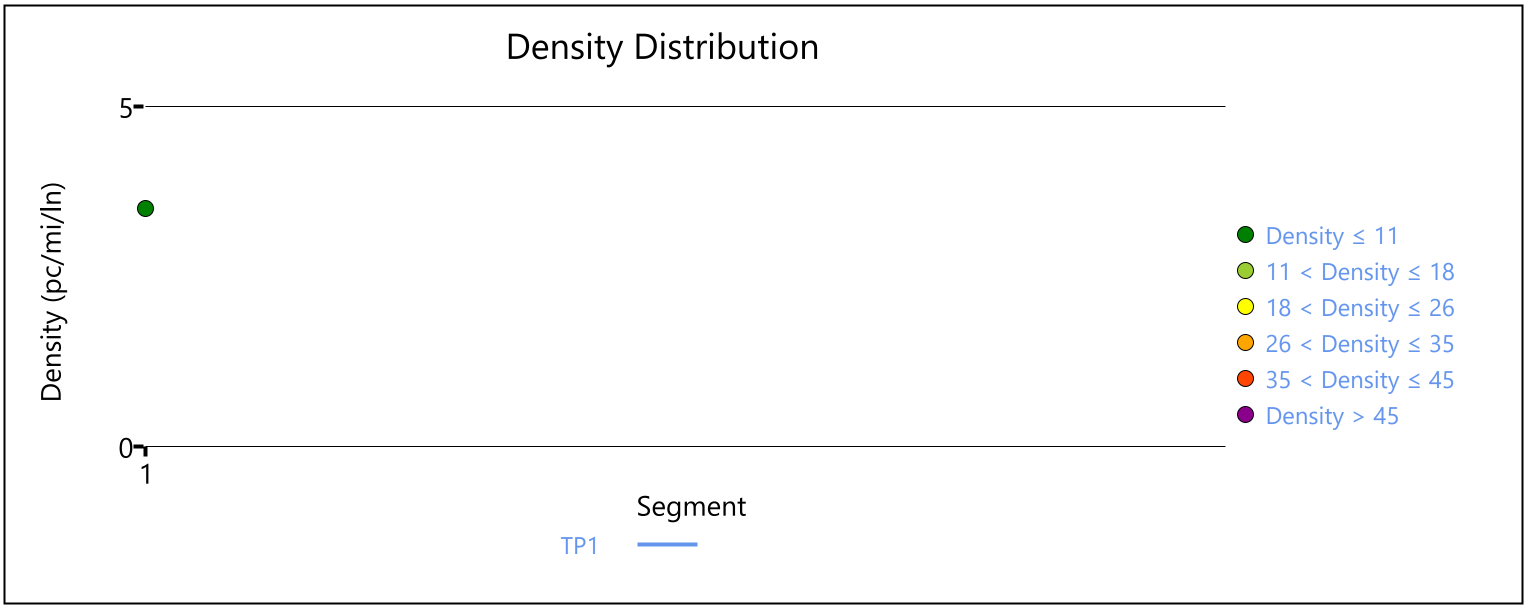
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	2.8
Average Travel Time, min	1.40	Density, pc/mi/ln	3.5

Messages

Comments







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Bayonne - SB LN - WithAction 10J.xuf

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HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	AM
Project Description	RFK NB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	0.69		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		3634	4

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.909	5978	8800	0.68	41.8	35.7	E

Facility Analysis Results

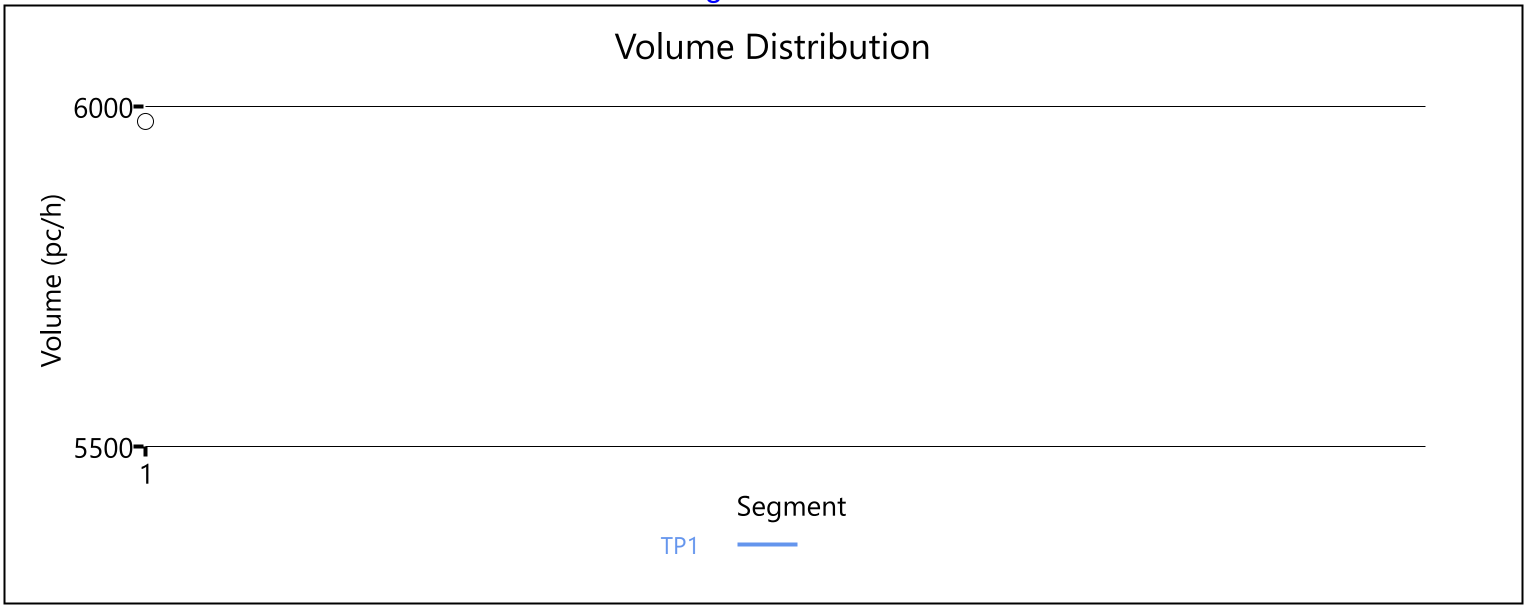
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	35.7	32.5	1.00	E

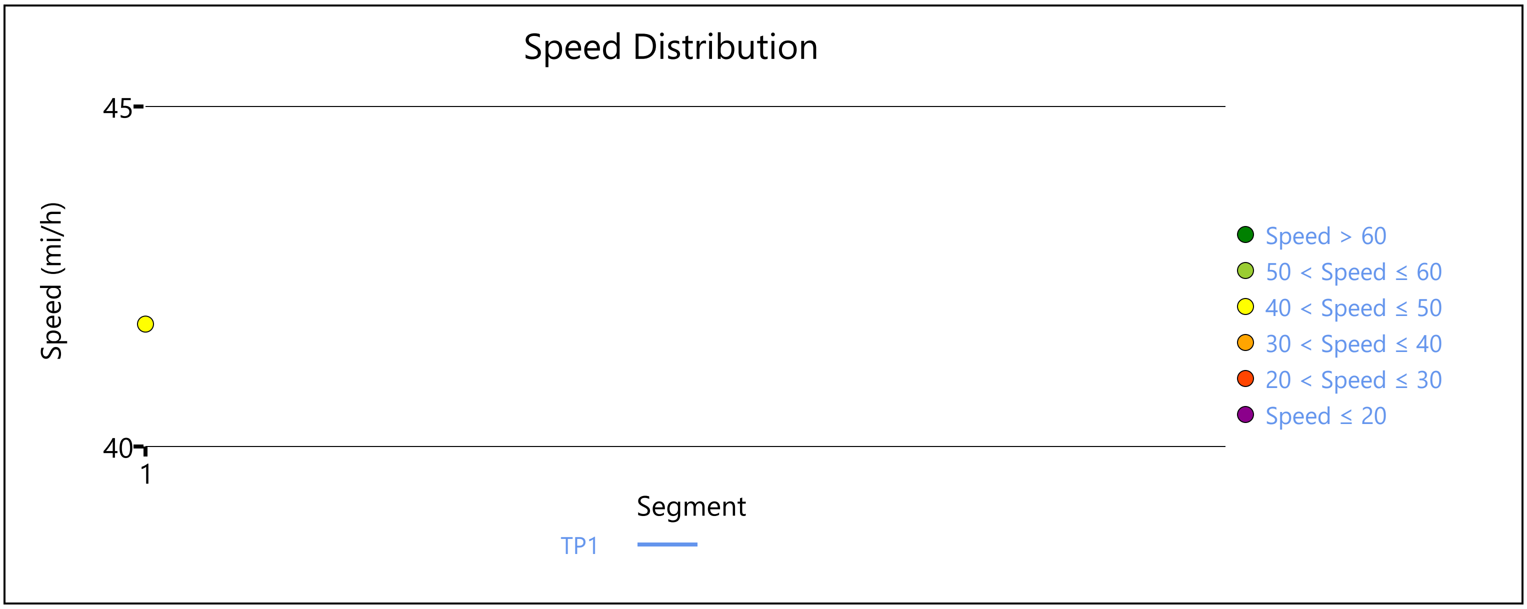
Facility Overall Results

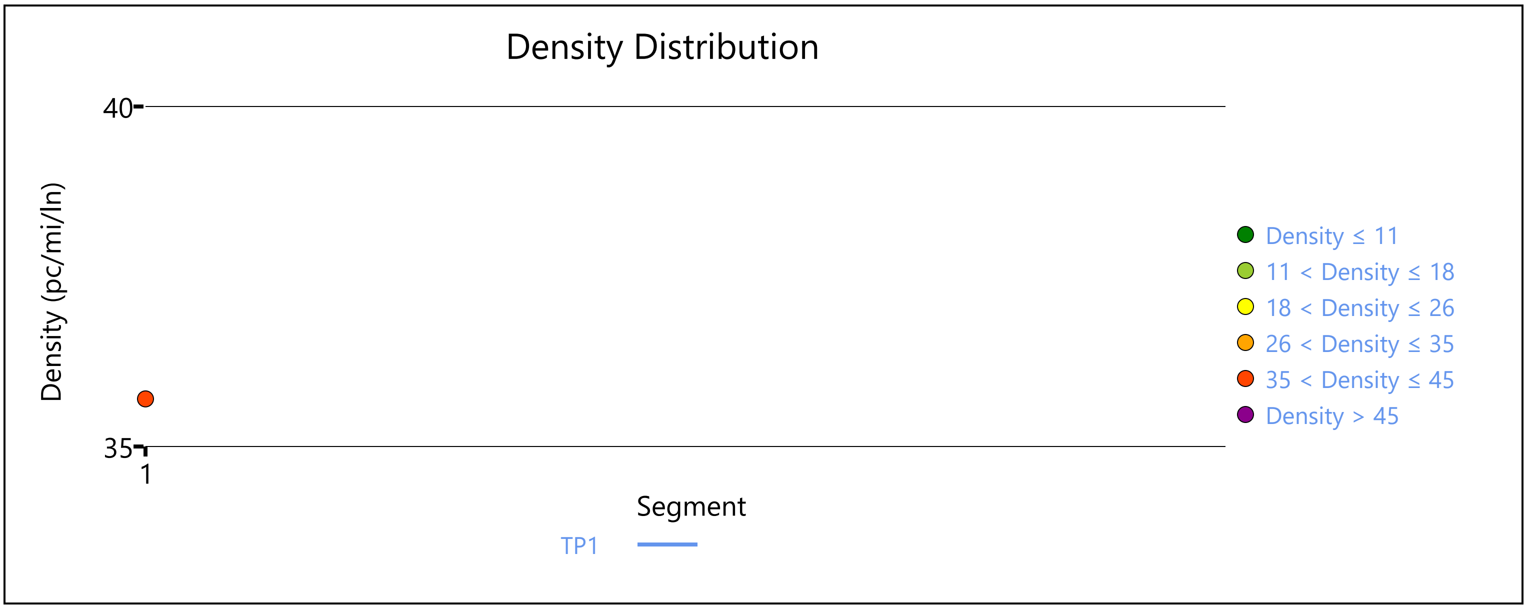
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	32.5
Average Travel Time, min	1.00	Density, pc/mi/ln	35.7

Messages

Comments







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RFK - NB AM - WithAction 10J.xuf

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HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	AM
Project Description	RFK SB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	0.69		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		3634	4

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.917	6436	8800	0.73	41.8	38.5	E

Facility Analysis Results

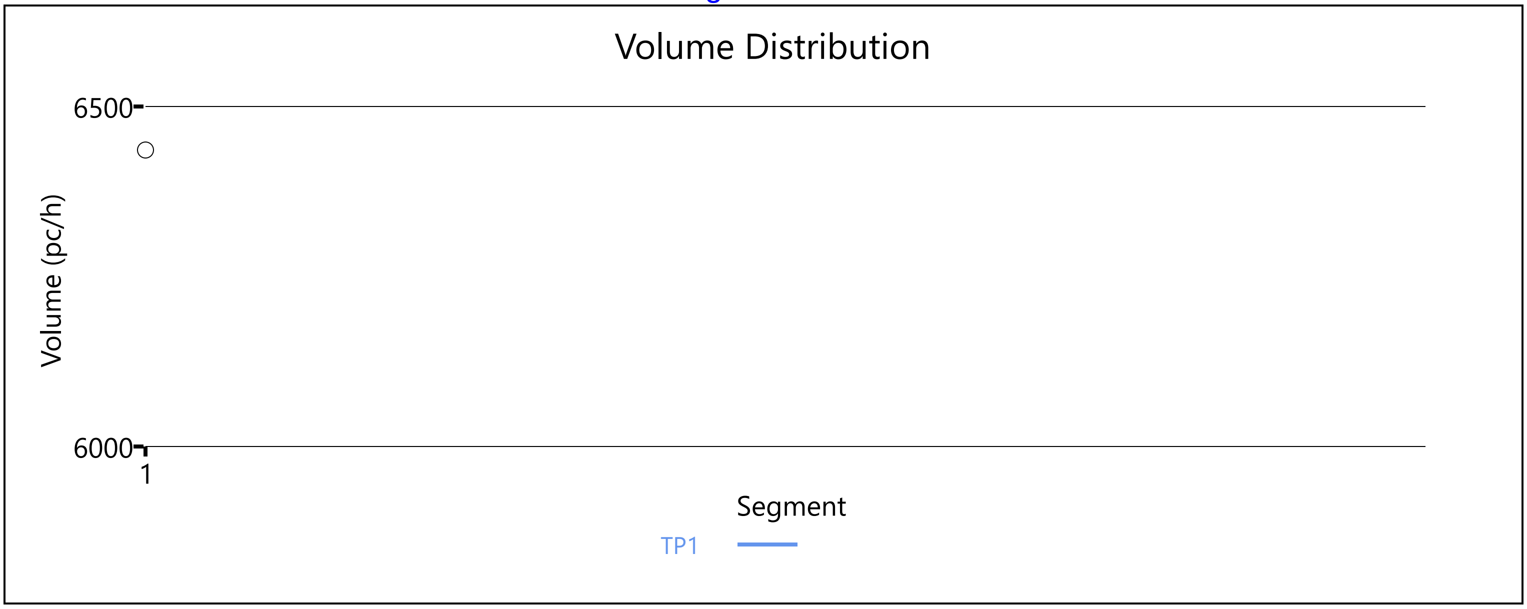
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	38.5	35.3	1.00	E

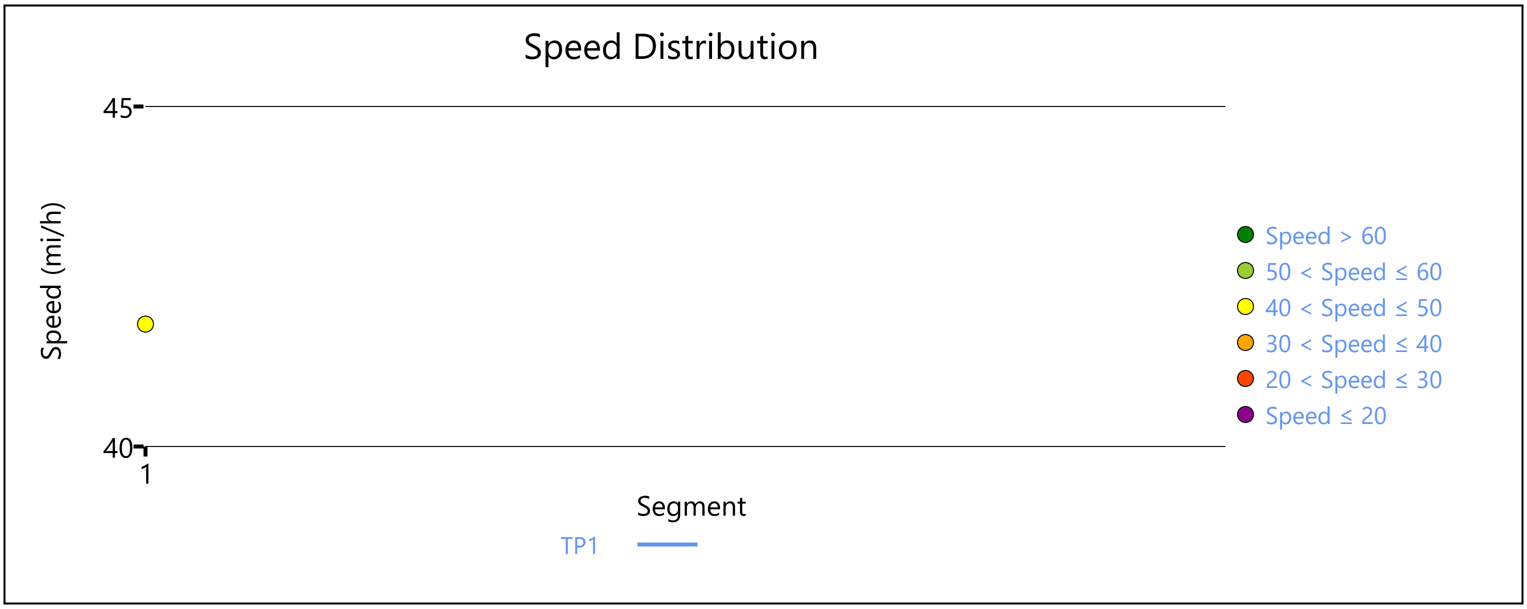
Facility Overall Results

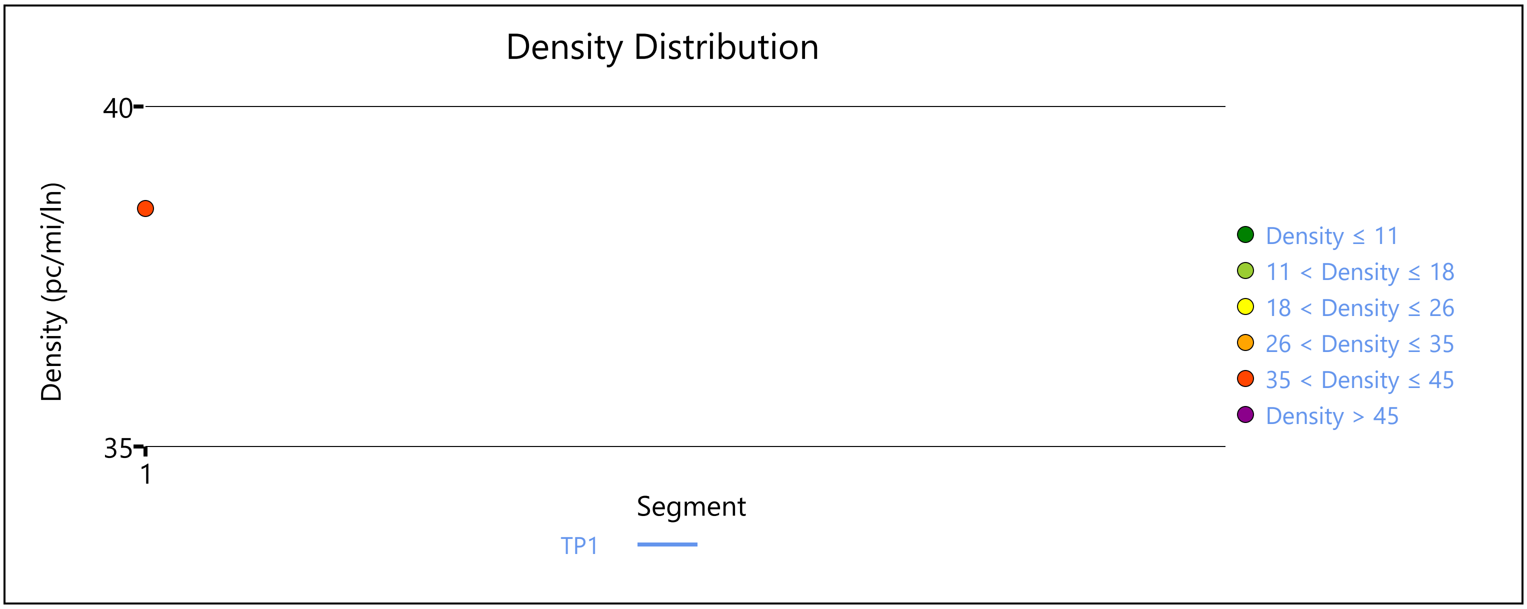
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	35.3
Average Travel Time, min	1.00	Density, pc/mi/ln	38.5

Messages

Comments


Volume Distribution
6500
6000
Volume (pc/h)
1
Segment
TP1


Speed Distribution
45
40
Speed (mi/h)
1
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
40
35
Density (pc/mi/ln)
1
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	MD
Project Description	RFK NB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	0.69		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		3634	4

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.891	5559	8800	0.63	41.8	33.3	D

Facility Analysis Results

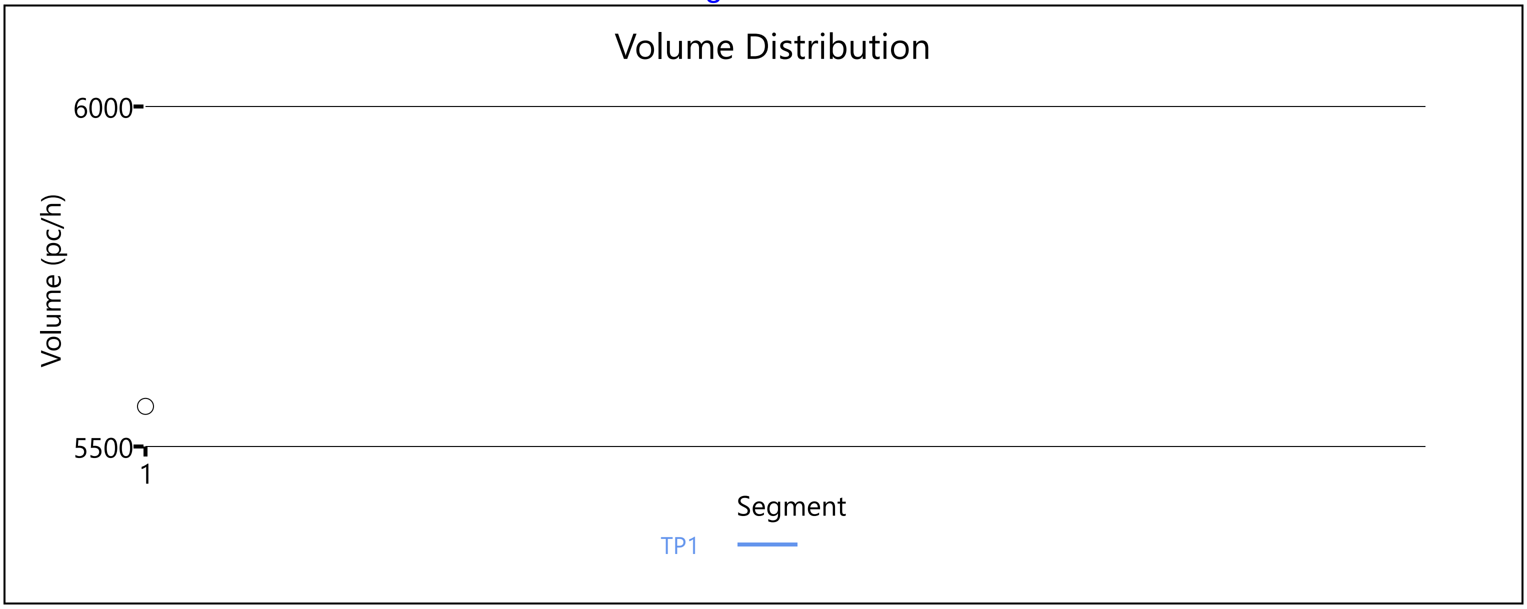
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	33.3	29.7	1.00	D

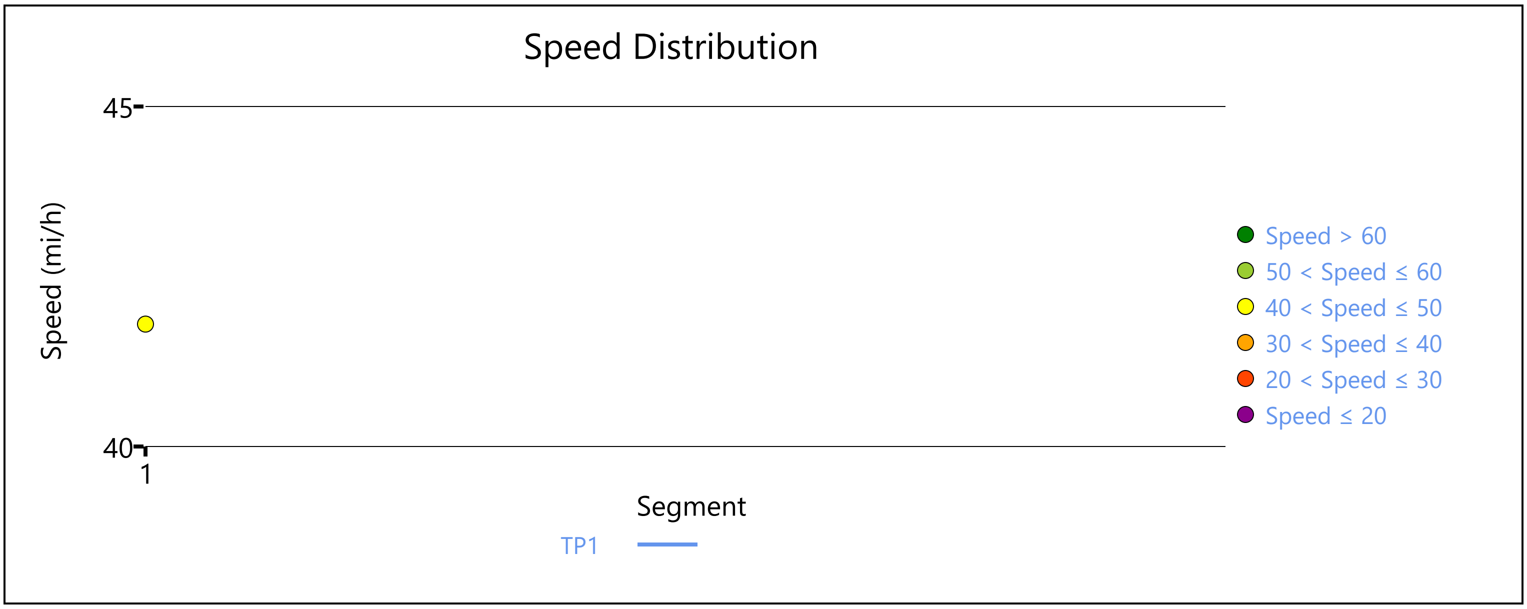
Facility Overall Results

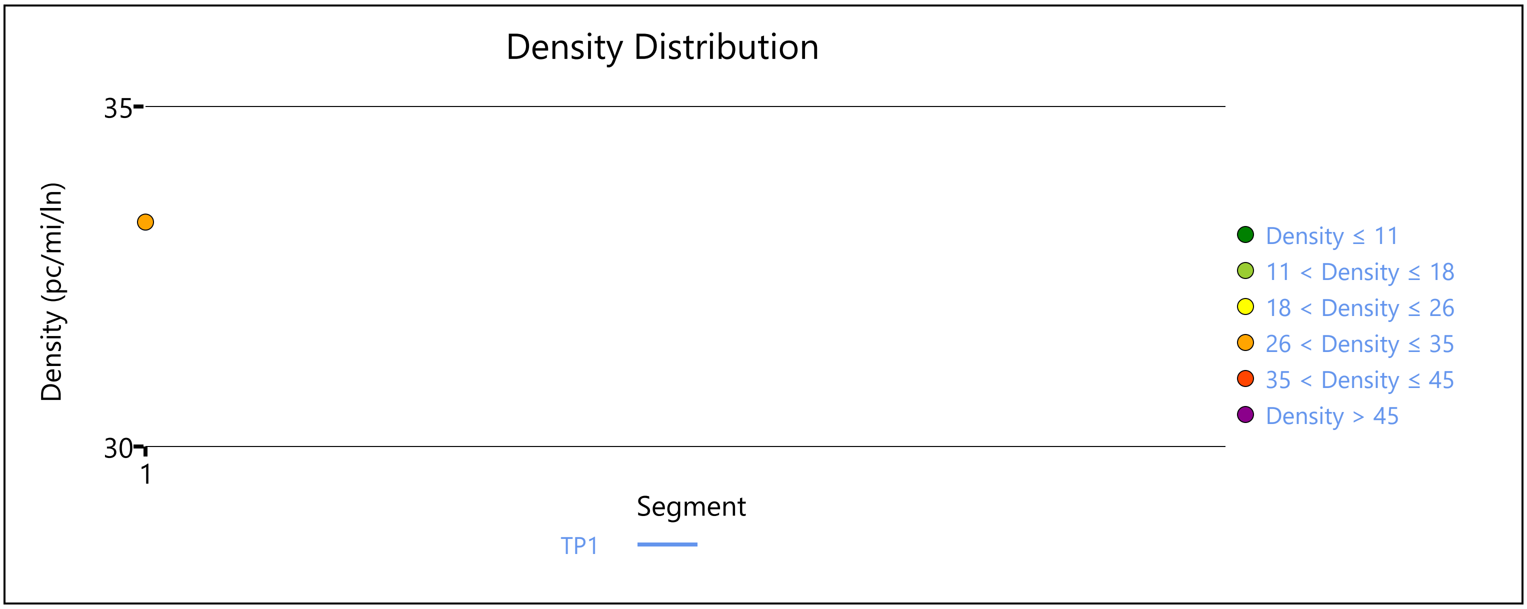
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	29.7
Average Travel Time, min	1.00	Density, pc/mi/ln	33.3

Messages

Comments


Volume Distribution
6000
Volume (pc/h)
5500
1
Segment
TP1


Speed Distribution
45
Speed (mi/h)
40
1
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
35
Density (pc/mi/ln)
30
1
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	MD
Project Description	RFK SB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	0.69		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		3634	4

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.888	4919	8800	0.56	41.8	29.4	D

Facility Analysis Results

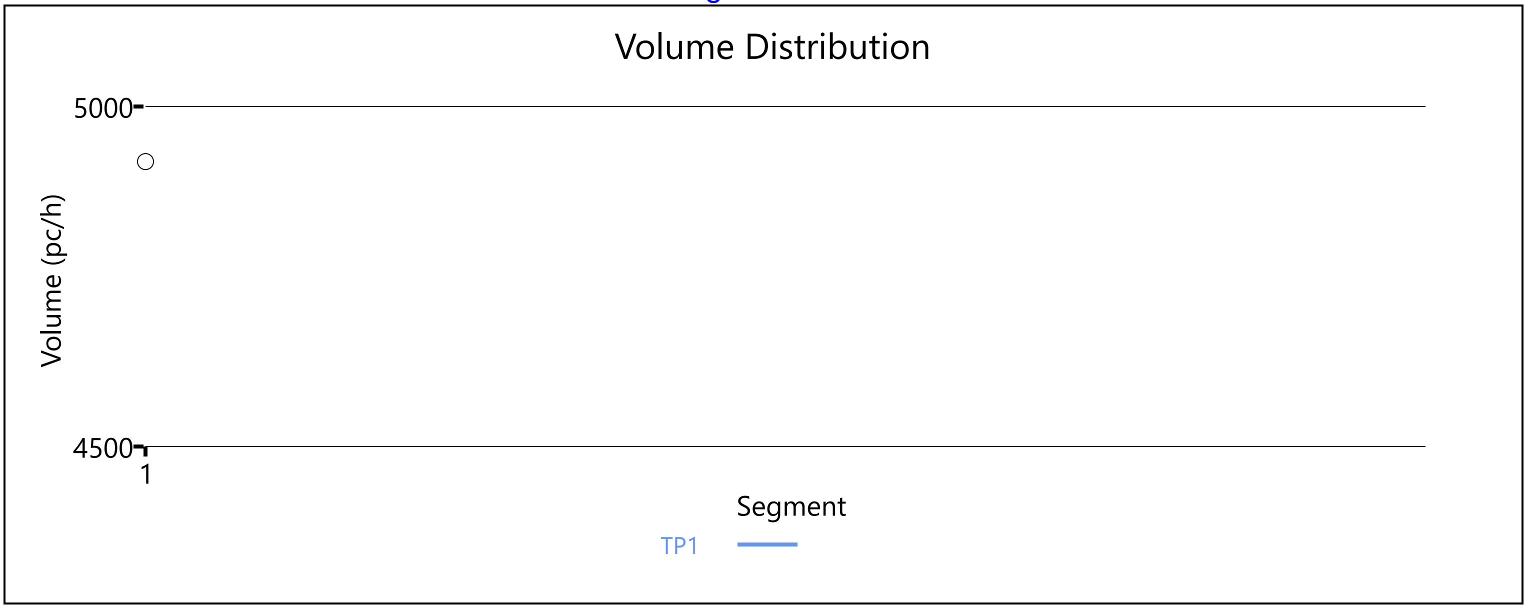
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	29.4	26.1	1.00	D

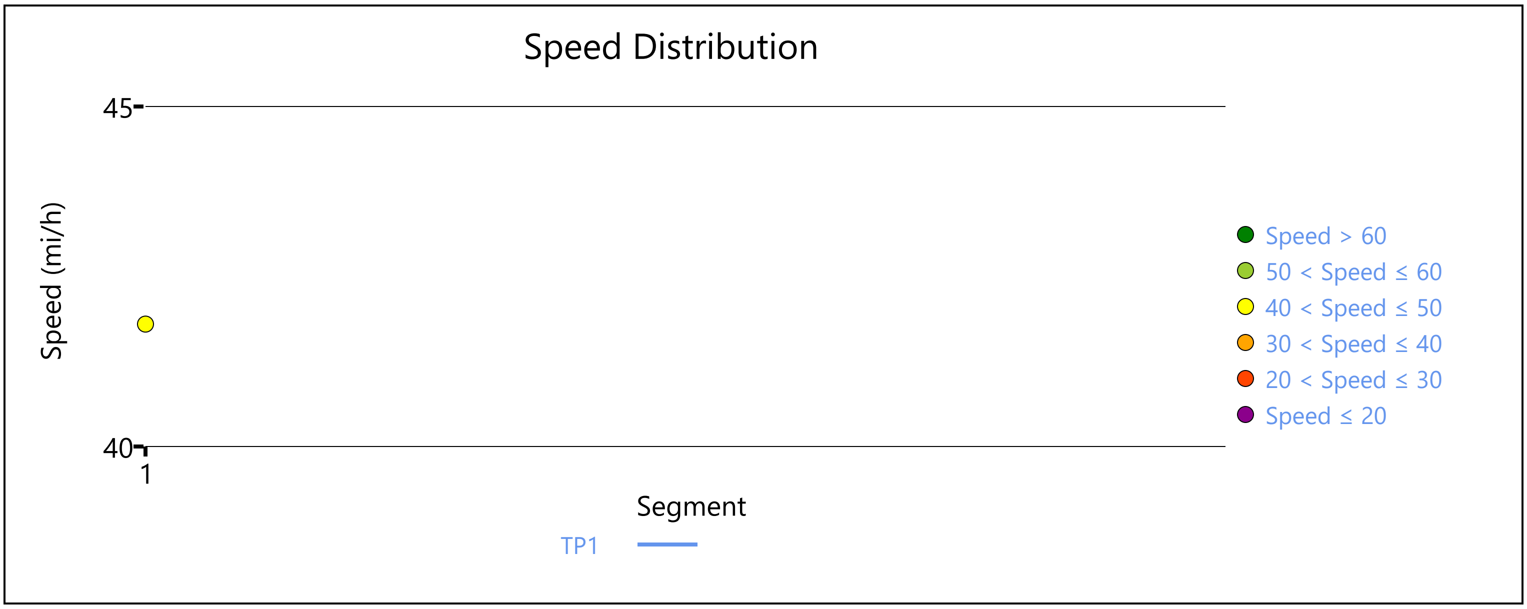
Facility Overall Results

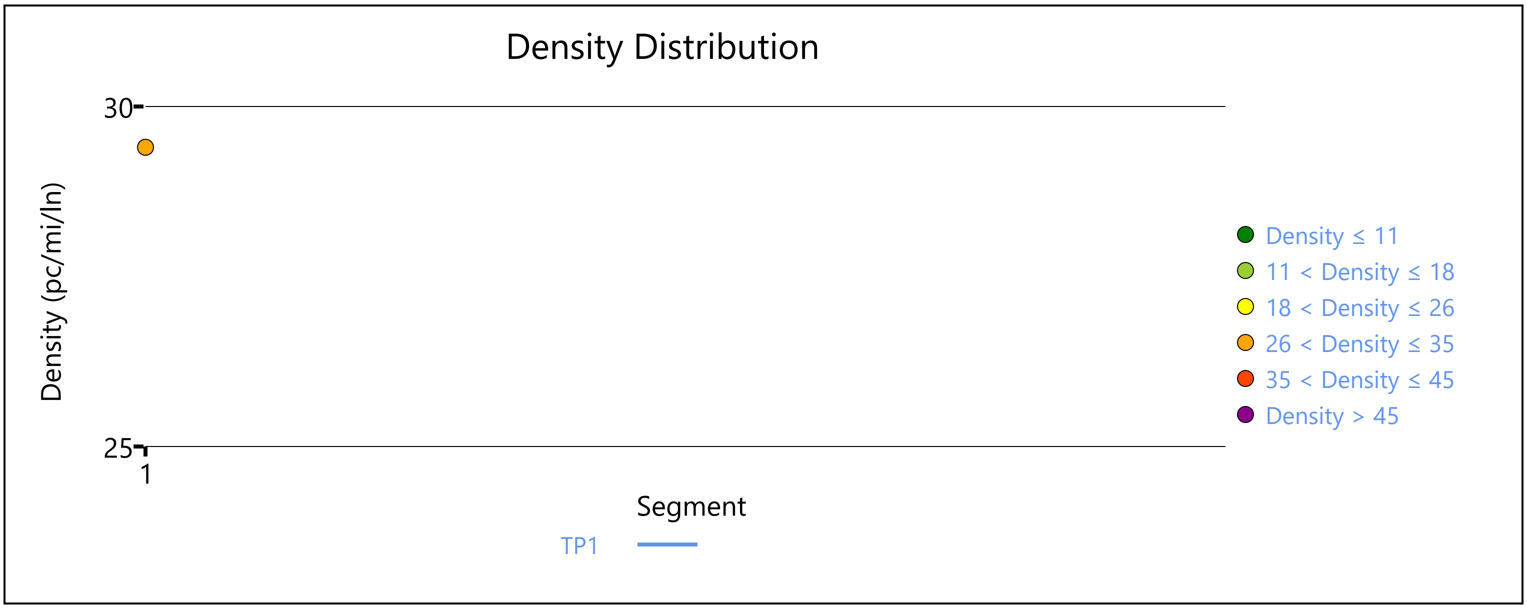
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	26.1
Average Travel Time, min	1.00	Density, pc/mi/ln	29.4

Messages

Comments







 HCS™ Freeways Version 7.9.5 Generated: 04/09/2024 13:59:35
RFK - SB MD - WithAction 10J.xuf

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HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	PM
Project Description	RFK NB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	0.69		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		3634	4

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.952	5868	8800	0.67	41.8	35.1	E

Facility Analysis Results

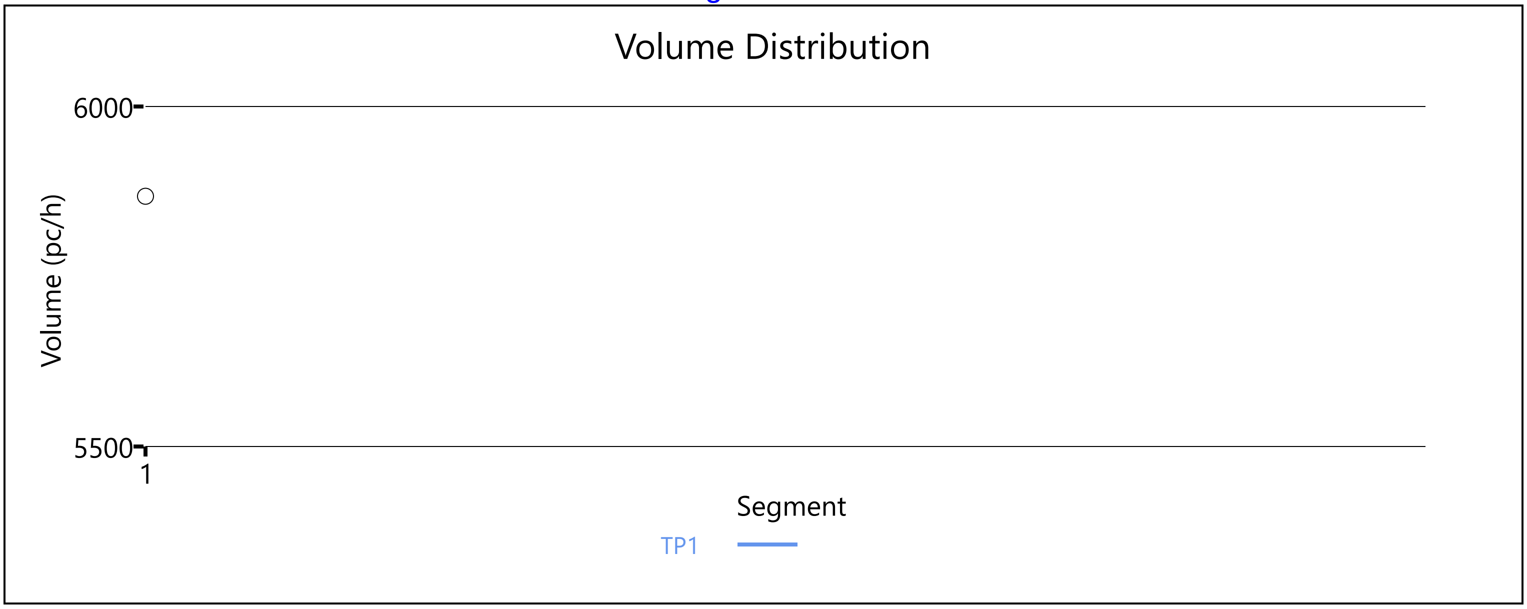
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	35.1	33.4	1.00	E

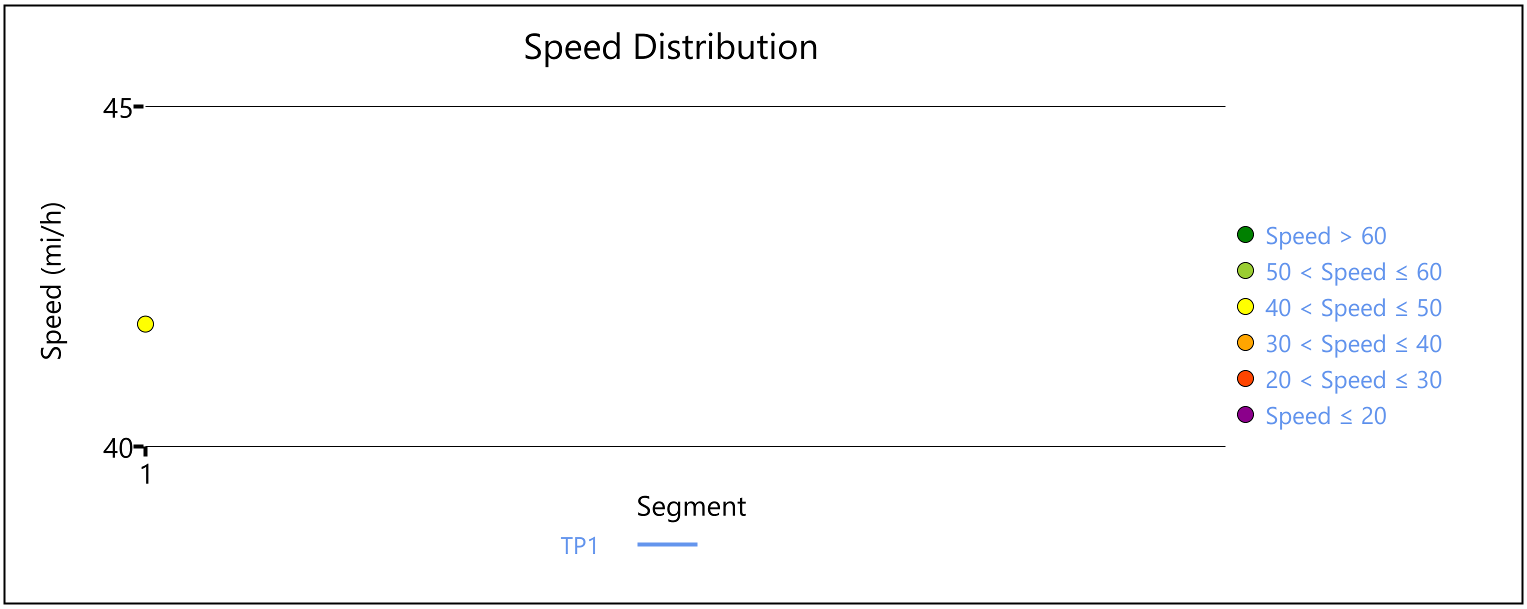
Facility Overall Results

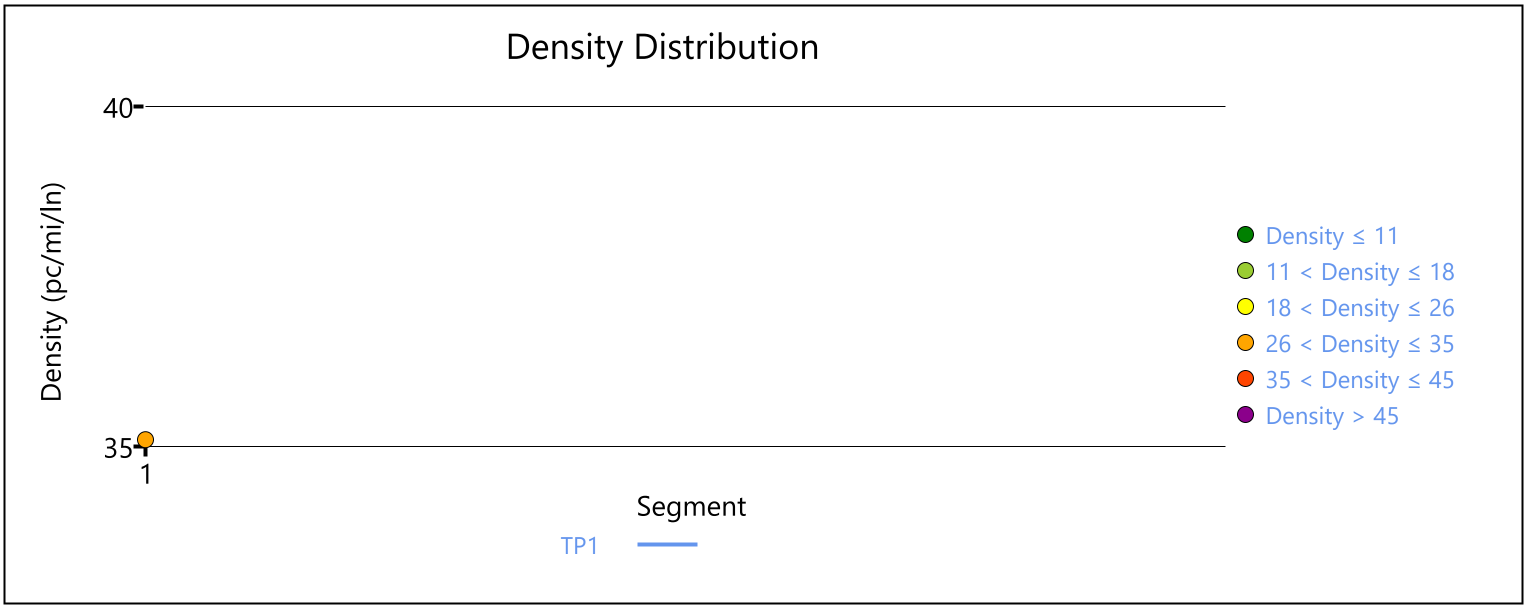
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	33.4
Average Travel Time, min	1.00	Density, pc/mi/ln	35.1

Messages

Comments







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RFK - NB PM - WithAction 10J.xuf

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HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	PM
Project Description	RFK SB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	0.69		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		3634	4

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.951	5564	8800	0.63	41.8	33.3	D

Facility Analysis Results

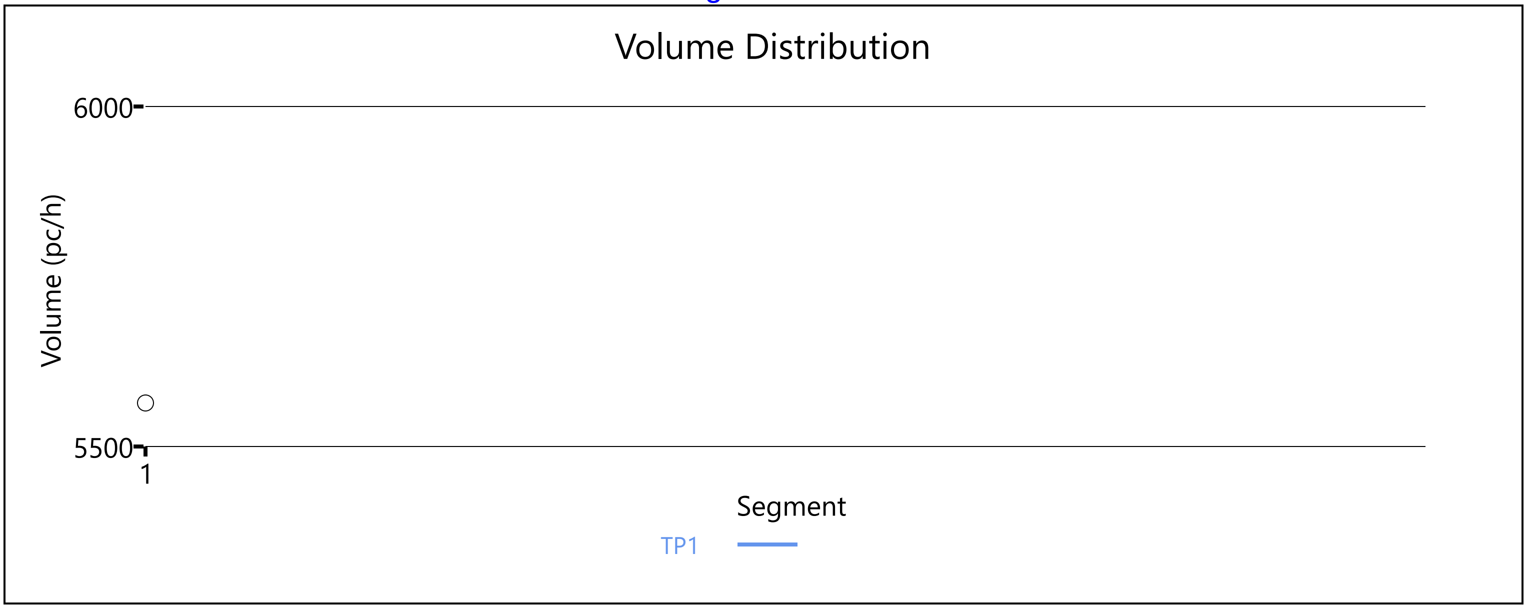
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	33.3	31.7	1.00	D

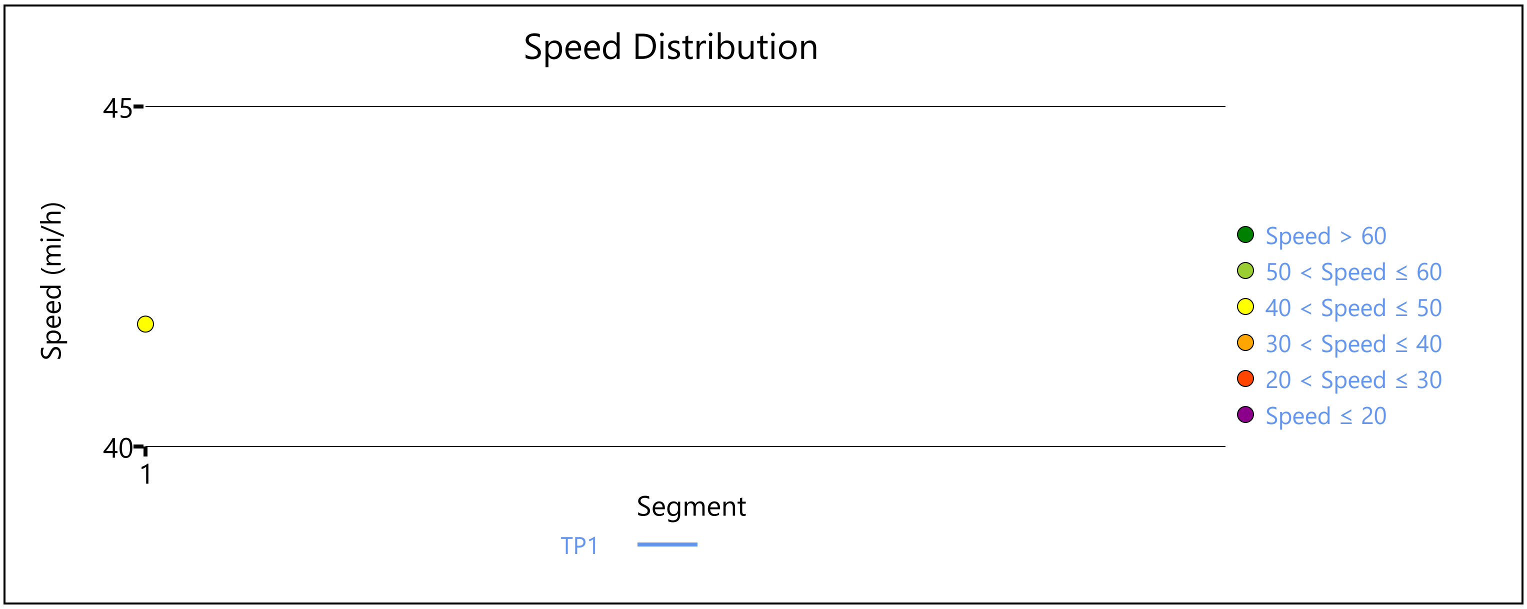
Facility Overall Results

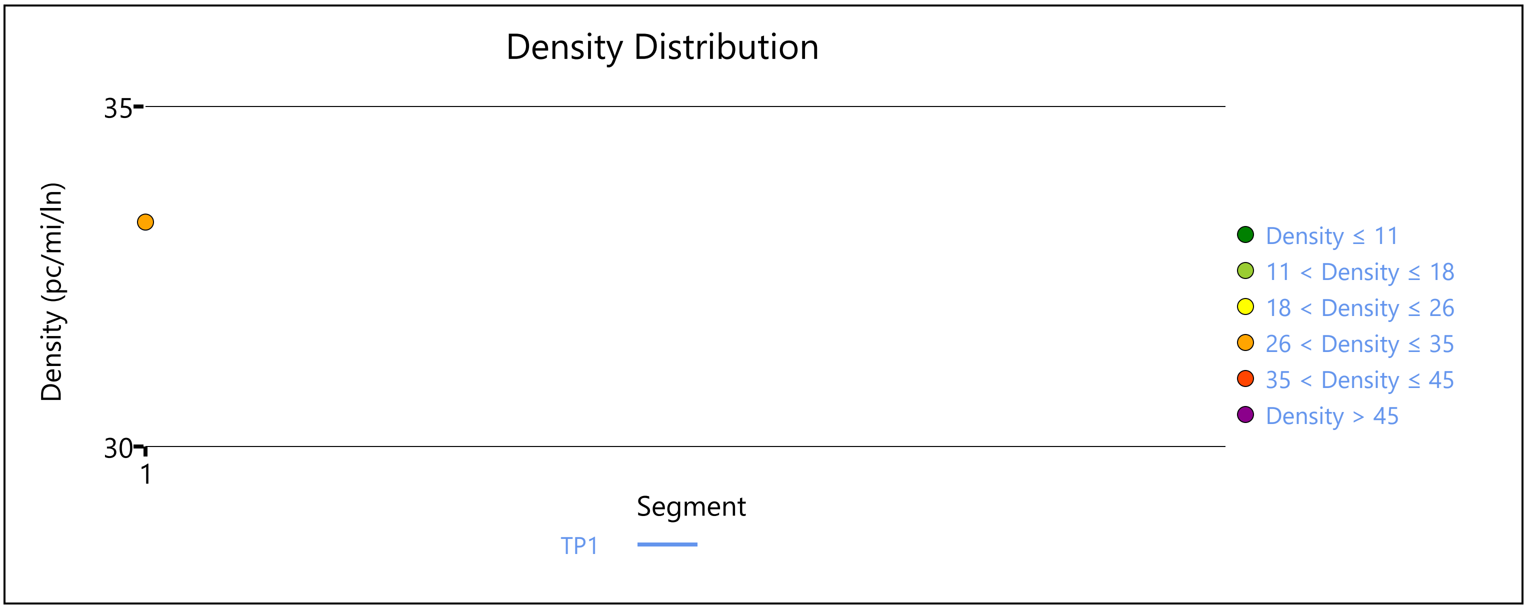
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	31.7
Average Travel Time, min	1.00	Density, pc/mi/ln	33.3

Messages

Comments


Volume Distribution
6000
Volume (pc/h)
5500
1
Segment
TP1


Speed Distribution
45
Speed (mi/h)
40
1
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
35
Density (pc/mi/ln)
30
1
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	LN
Project Description	RFK NB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	0.69		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		3634	4

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.870	1143	8800	0.13	41.8	6.8	A

Facility Analysis Results

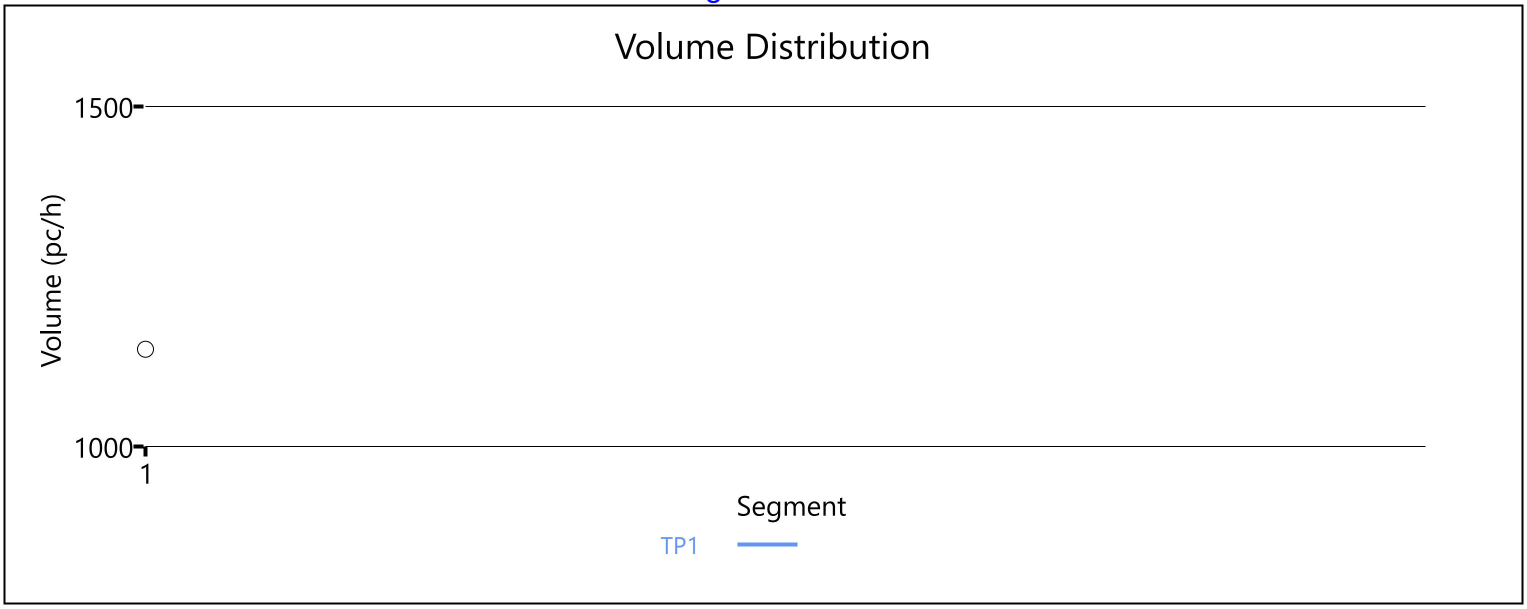
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	6.8	5.9	1.00	A

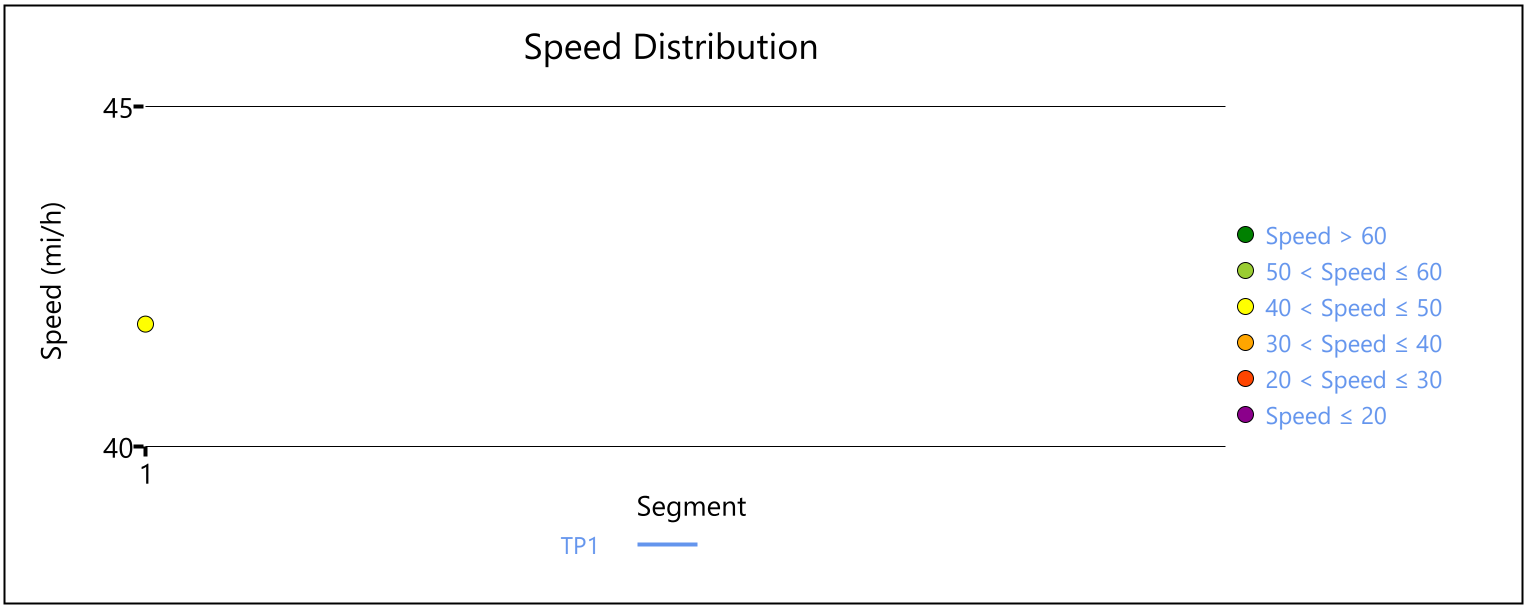
Facility Overall Results

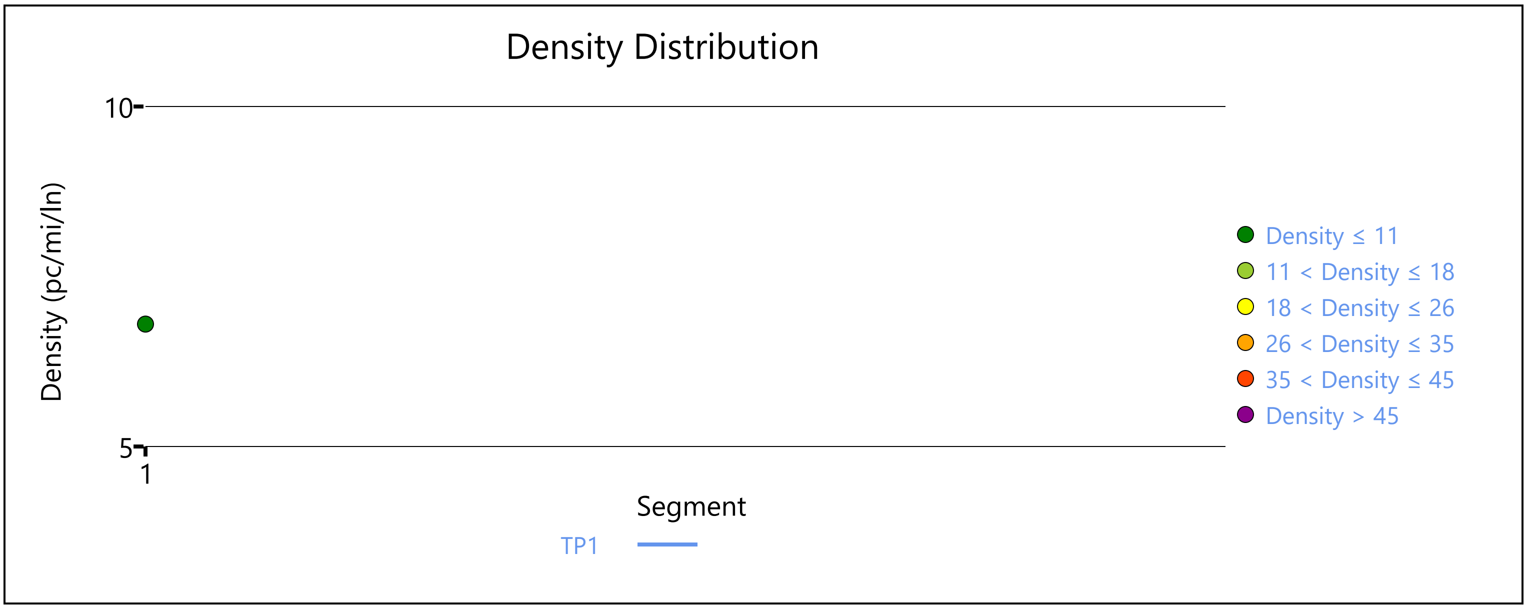
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	5.9
Average Travel Time, min	1.00	Density, pc/mi/ln	6.8

Messages

Comments


Volume Distribution
1500
Volume (pc/h)
1000
1
Segment
TP1


Speed Distribution
45
Speed (mi/h)
40
1
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
10
Density (pc/mi/ln)
5
1
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	LN
Project Description	RFK SB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	1
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	0.69		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		3634	4

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.924	1675	8800	0.19	41.8	10.0	A

Facility Analysis Results

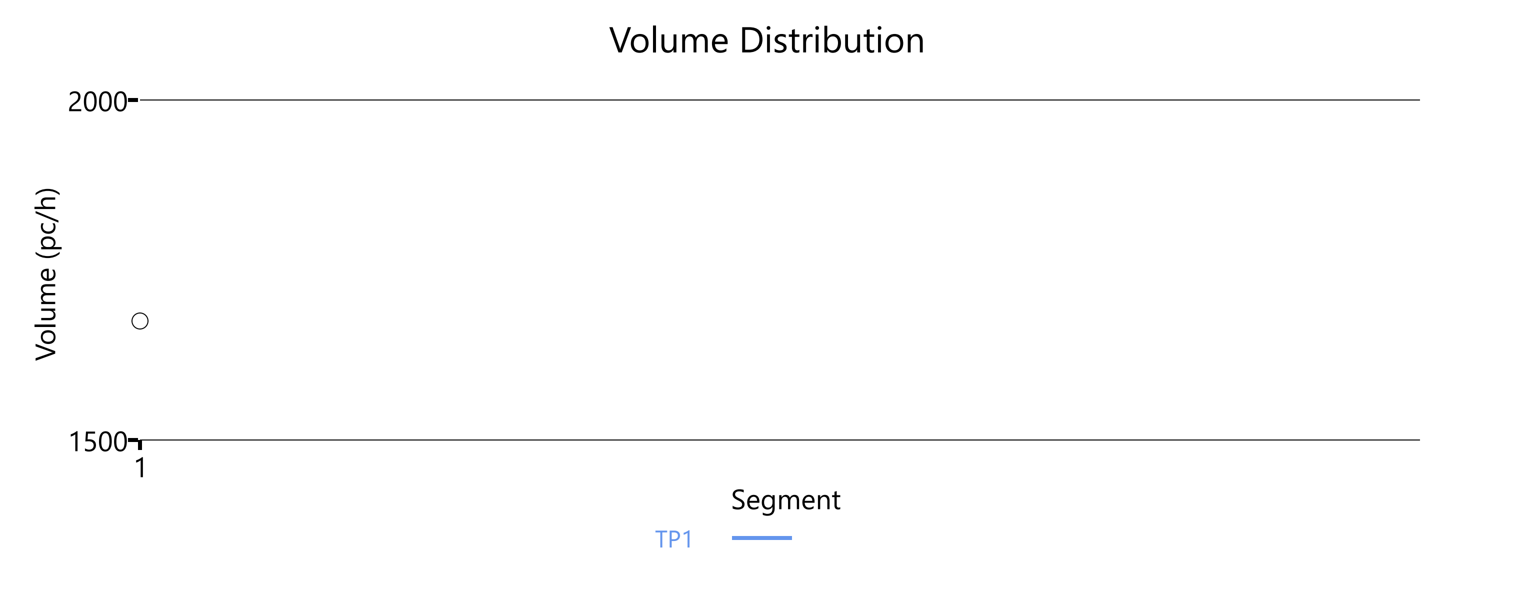
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	41.8	10.0	9.2	1.00	A

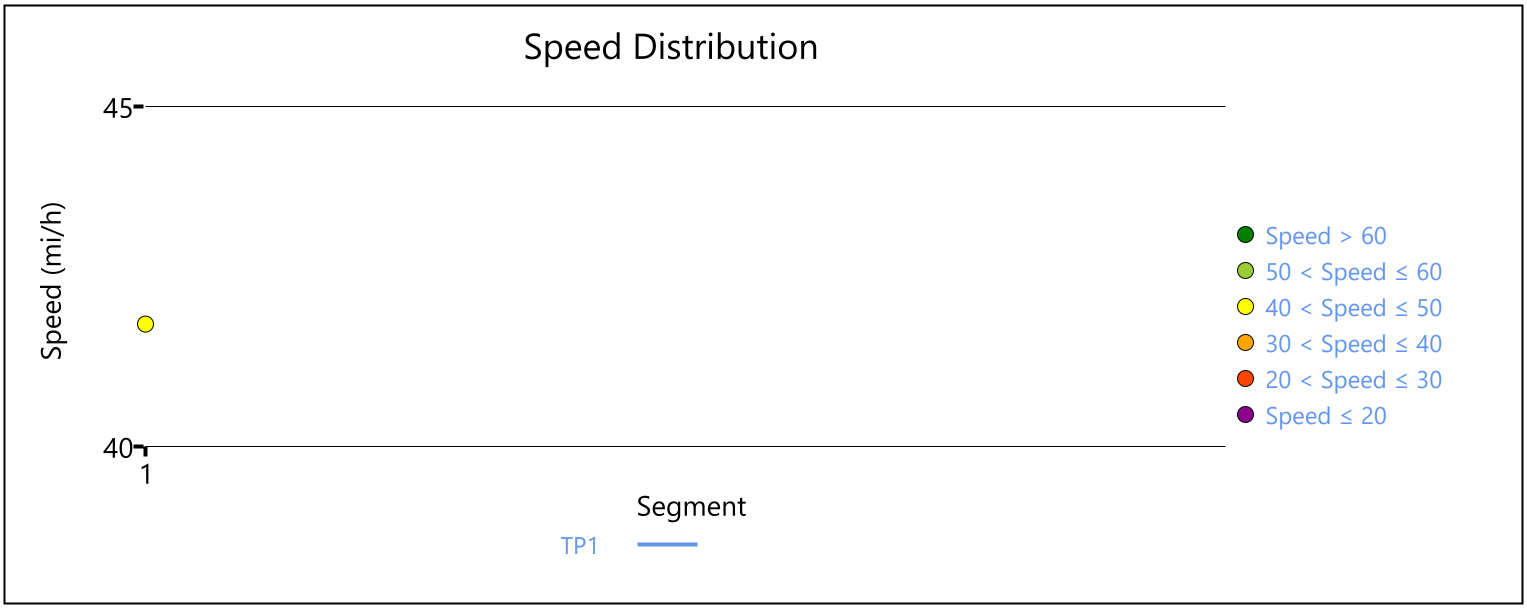
Facility Overall Results

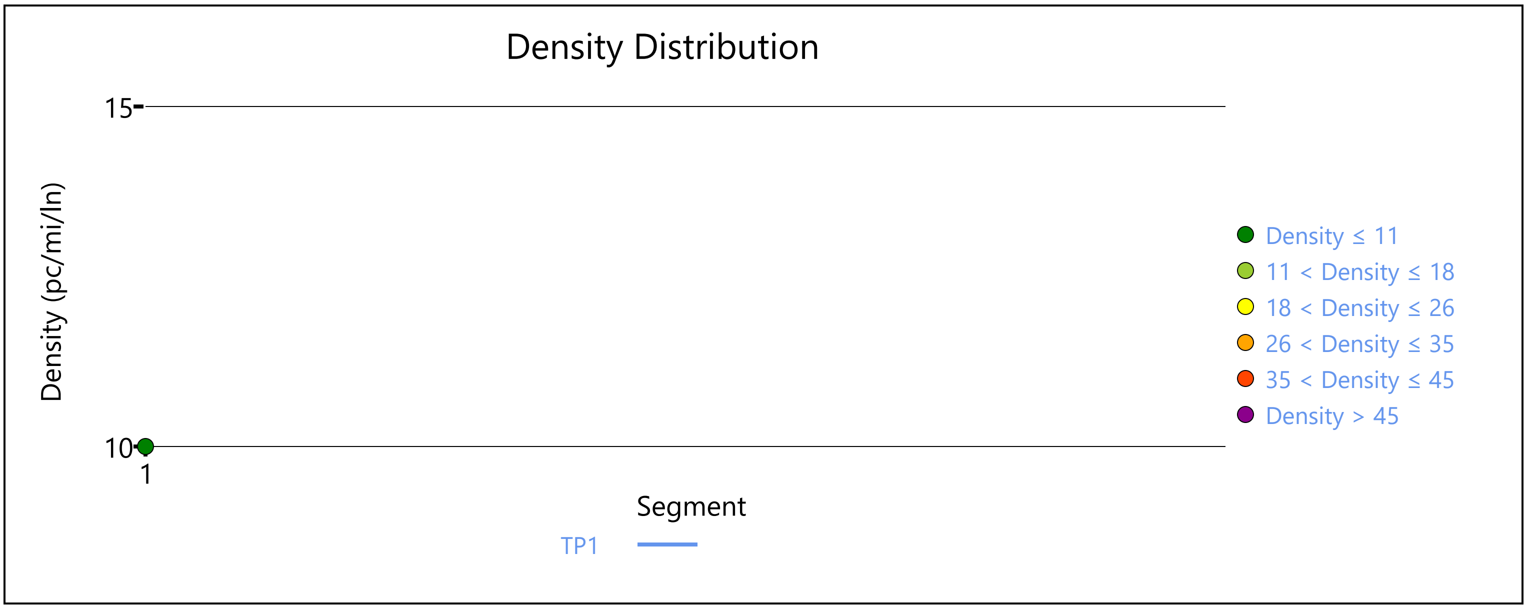
Space Mean Speed, mi/h	41.8	Density, veh/mi/ln	9.2
Average Travel Time, min	1.00	Density, pc/mi/ln	10.0

Messages

Comments


Volume Distribution
2000
Volume (pc/h)
1500
1
Segment
TP1


Speed Distribution
45
Speed (mi/h)
40
1
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
15
Density (pc/mi/ln)
10
1
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	AM
Project Description	NJTP Eastern Spur NB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.07		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		2500	3
2	Merge	Merge	_	663	3
3	Basic	Basic		2500	3

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.789	275	6654	0.04	51.8	1.8	A

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.789	0.855	1094	819	6750	4000	0.16	0.20	51.7	51.3	7.1	8.6	A

Segment 3: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.838	1094	6654	0.16	51.8	7.0	A

Facility Analysis Results

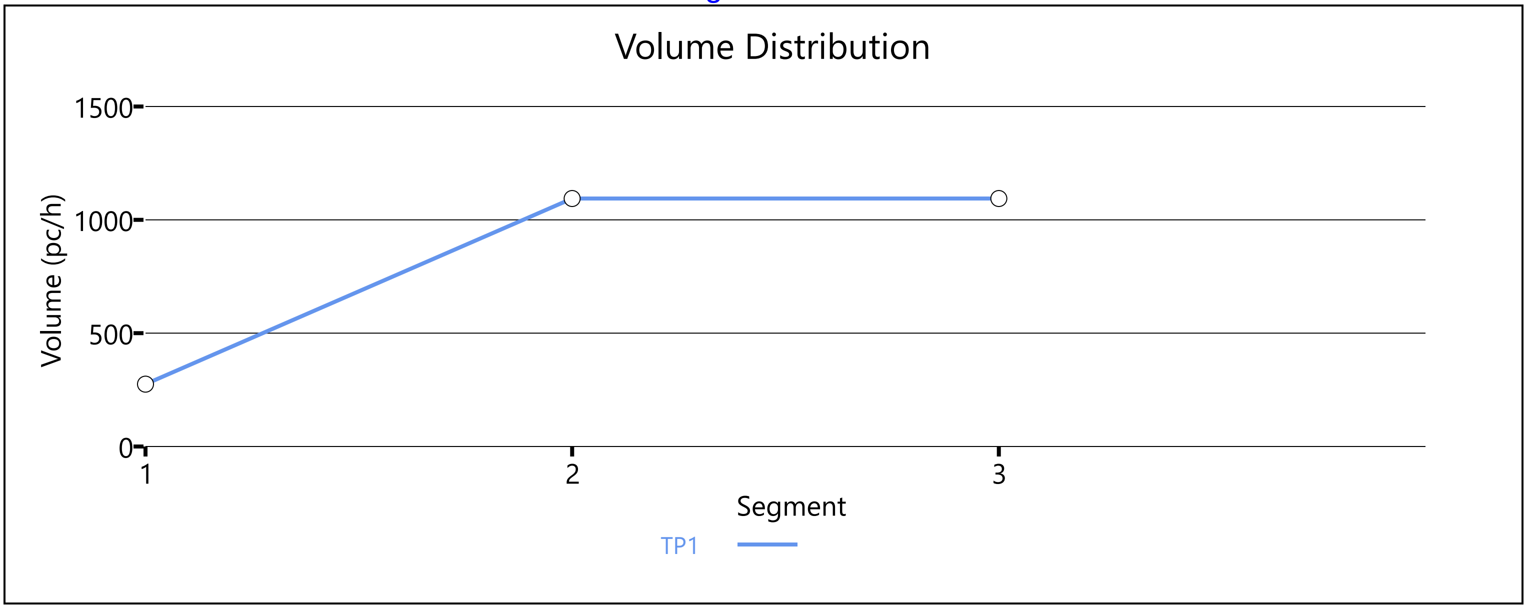
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	51.8	4.7	3.9	1.20	A

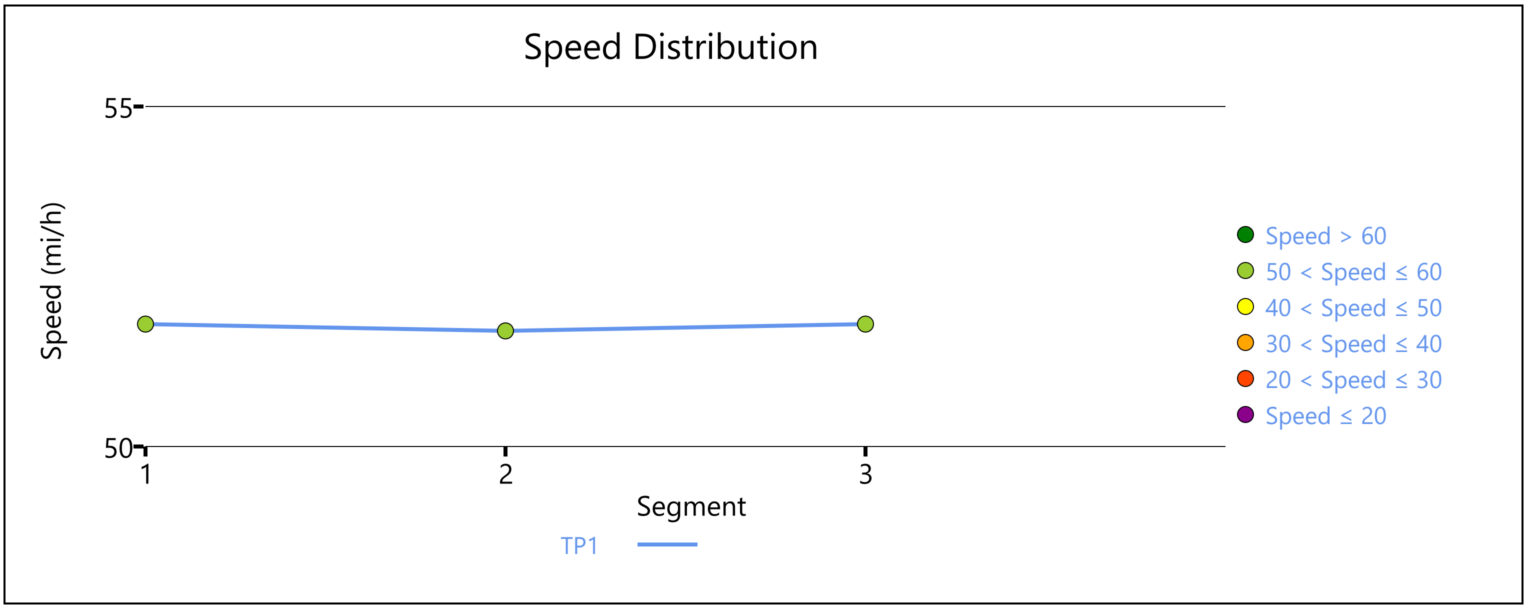
Facility Overall Results

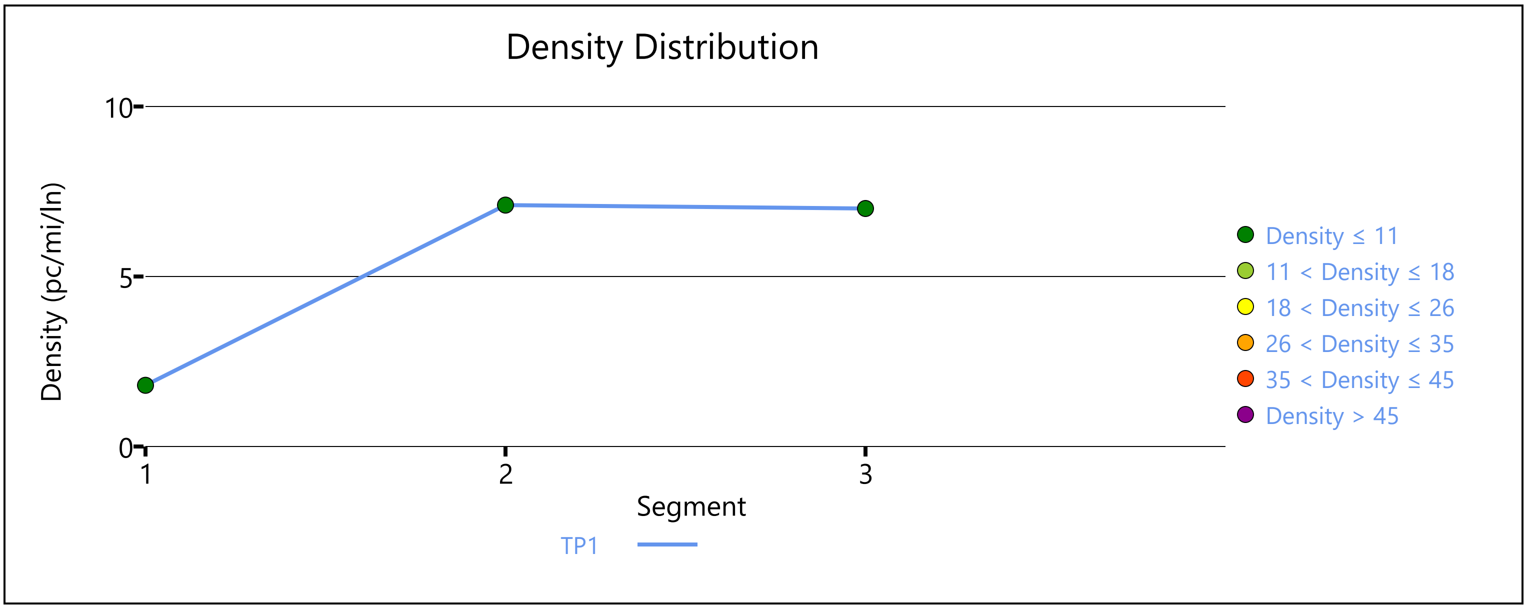
Space Mean Speed, mi/h	51.8	Density, veh/mi/ln	3.9
Average Travel Time, min	1.20	Density, pc/mi/ln	4.7

Messages

Comments







 HCS™ Freeways Version 7.9.5 Generated: 04/09/2024 09:46:35

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HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	AM
Project Description	NJTP Eastern Spur SB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		2500	3
2	Diverge	Basic	_	1800	3
3	Basic	Basic		2500	3

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.856	1434	6654	0.22	51.8	9.2	A

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.856	0.836	1434	836	6750	4200	0.21	0.20	54.9	55.0	8.7	8.7	A

Segment 3: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.880	601	6654	0.09	51.8	3.9	A

Facility Analysis Results

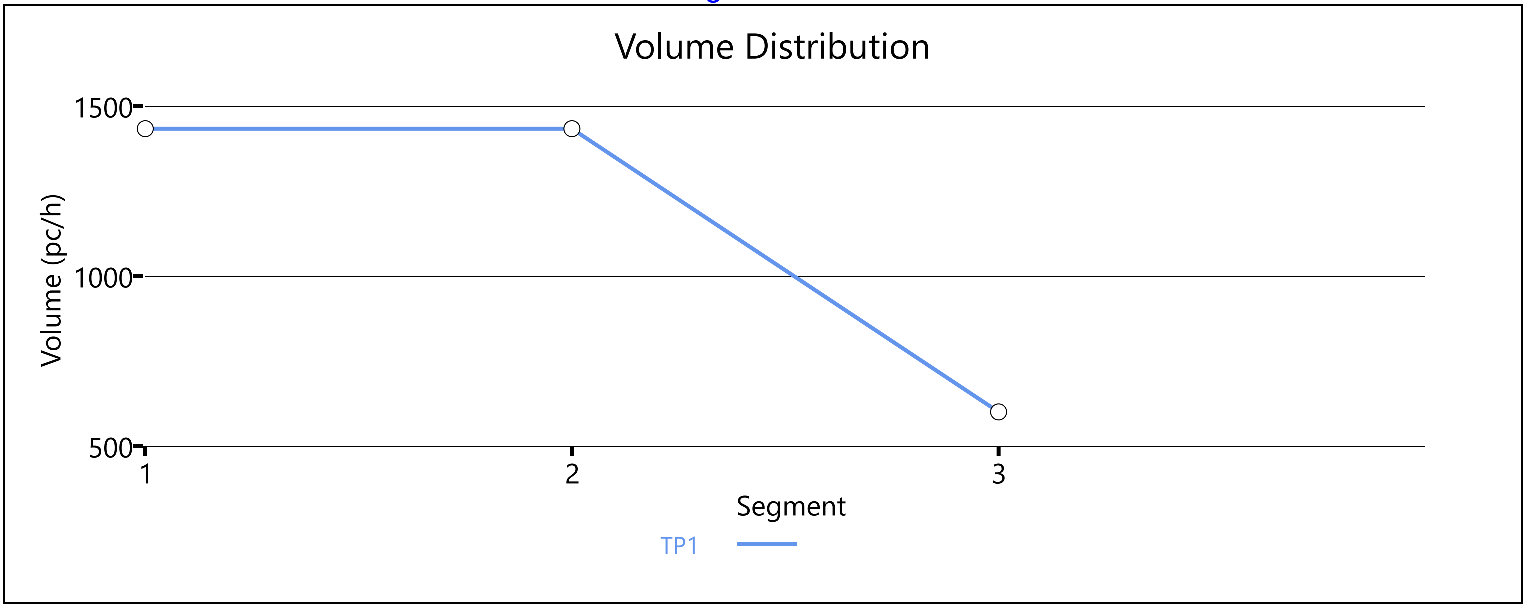
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	52.8	7.1	6.1	1.50	A

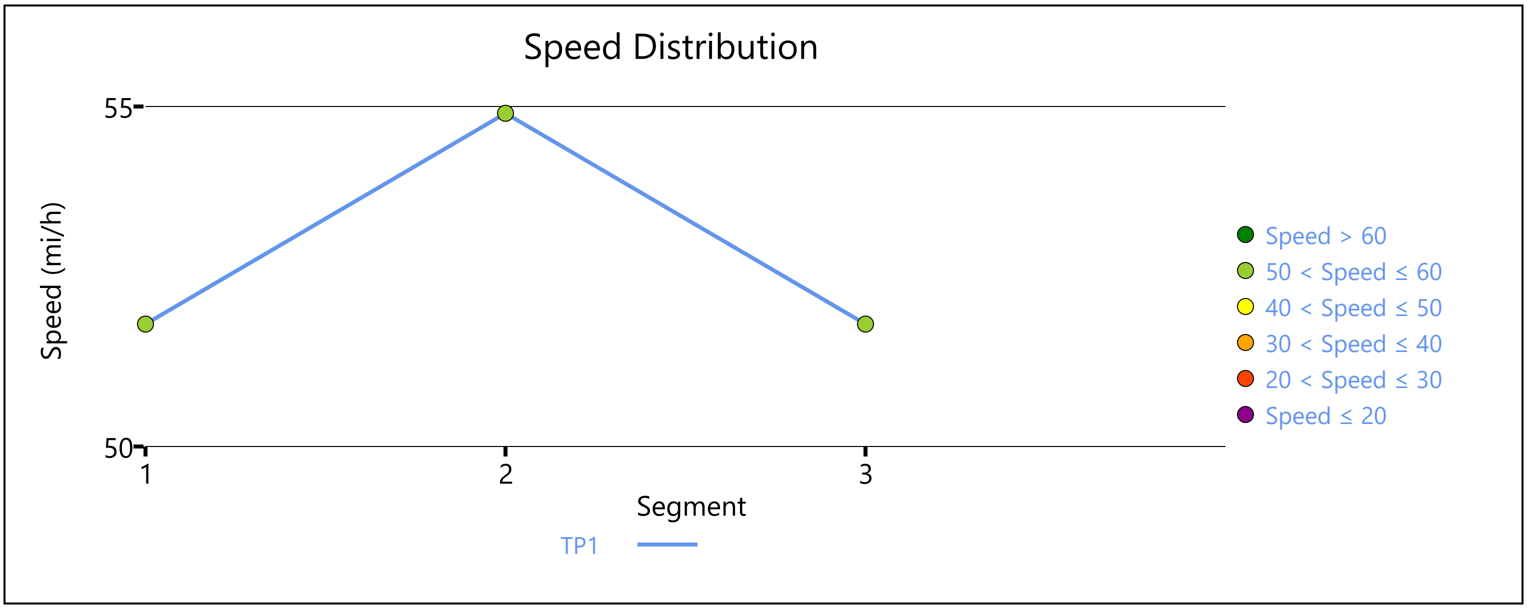
Facility Overall Results

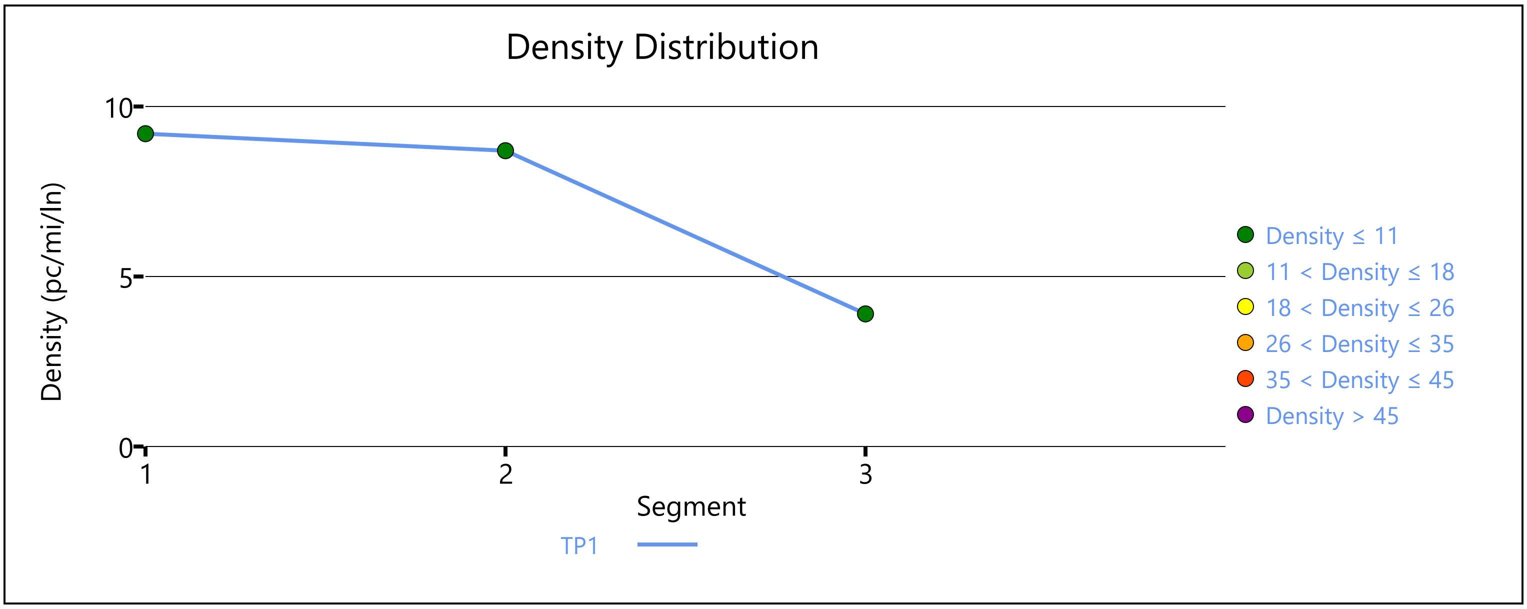
Space Mean Speed, mi/h	52.8	Density, veh/mi/ln	6.1
Average Travel Time, min	1.50	Density, pc/mi/ln	7.1

Messages

WARNING 1	Ramp segment length is longer than 1500 feet for segment 2.







 HCS™ Freeways Version 7.9.5 Generated: 04/09/2024 09:48:34

NJTP Eastern Spur - SB AM - WithAction 10J.xuf

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HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	MD
Project Description	NJTP Eastern Spur NB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.07		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		2500	3
2	Merge	Merge	_	663	3
3	Basic	Basic		2500	3

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.795	352	6654	0.05	51.8	2.3	A

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.795	0.832	1112	760	6750	4000	0.16	0.19	51.8	51.3	7.2	8.5	A

Segment 3: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.821	1110	6654	0.17	51.8	7.1	A

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	51.8	5.0	4.0	1.20	A

Facility Overall Results

Space Mean Speed, mi/h	51.8	Density, veh/mi/ln	4.0
Average Travel Time, min	1.20	Density, pc/mi/ln	5.0

Messages

Comments

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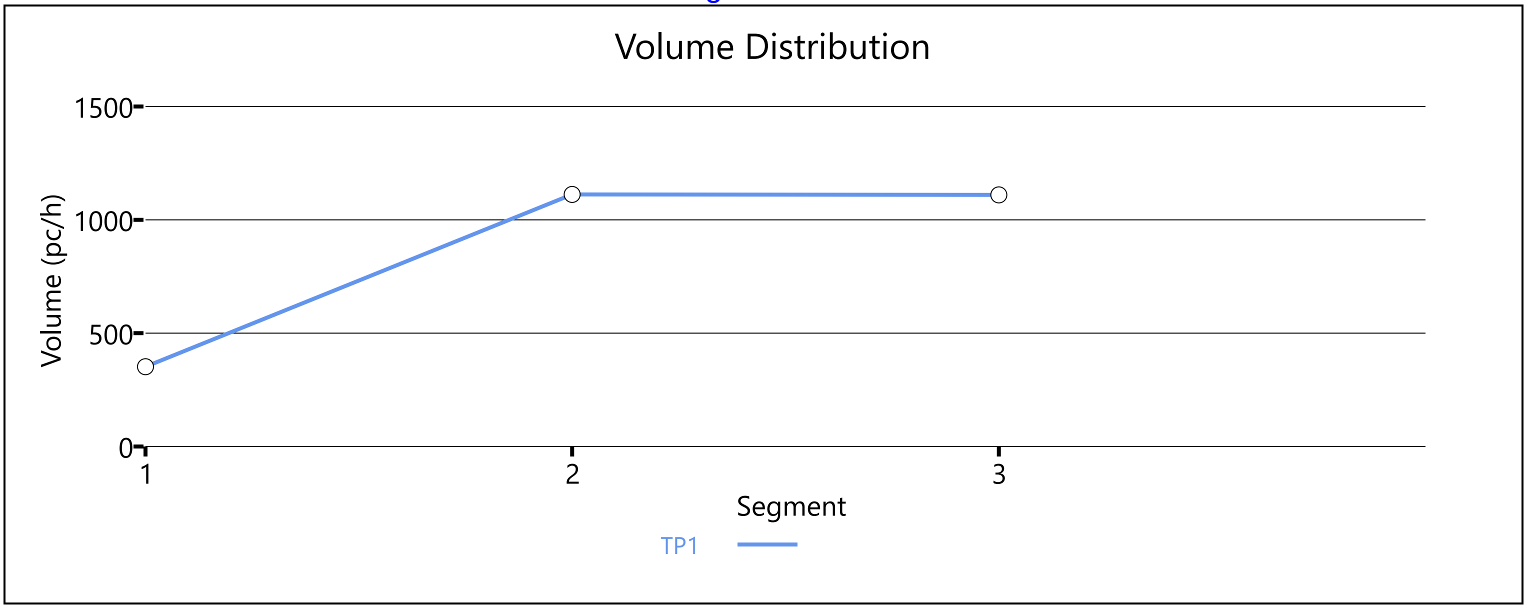
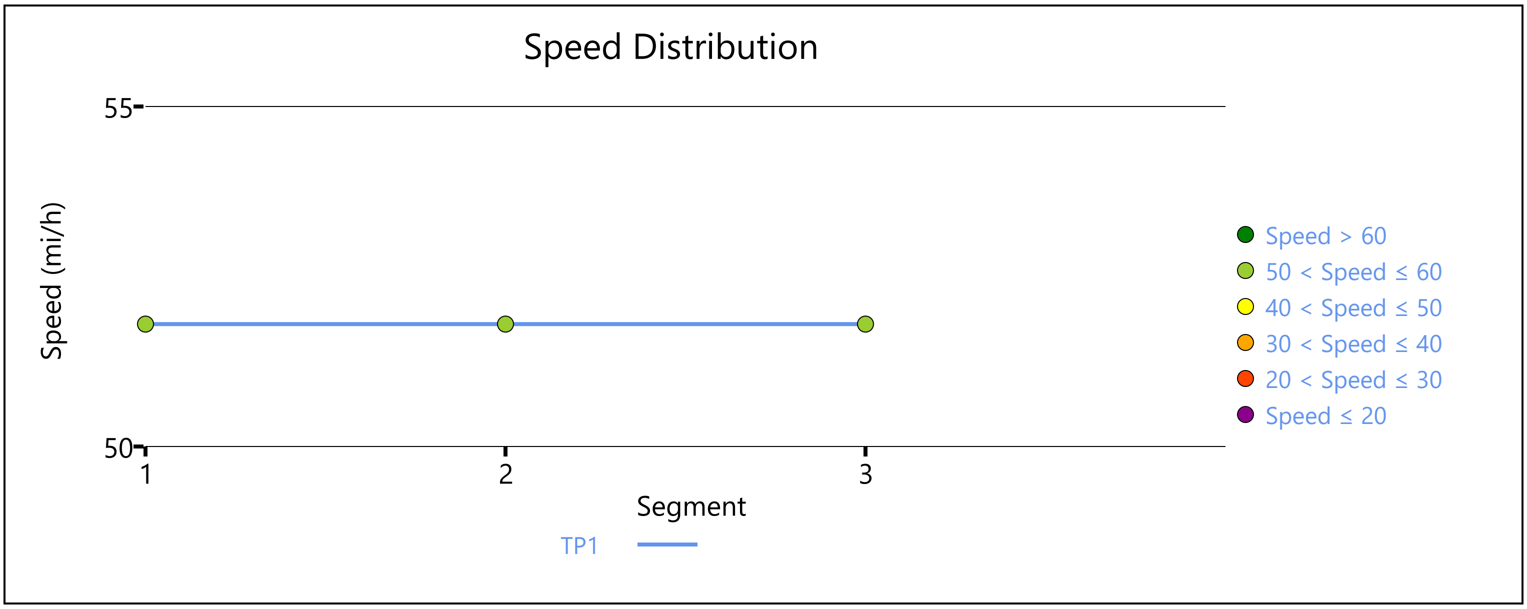
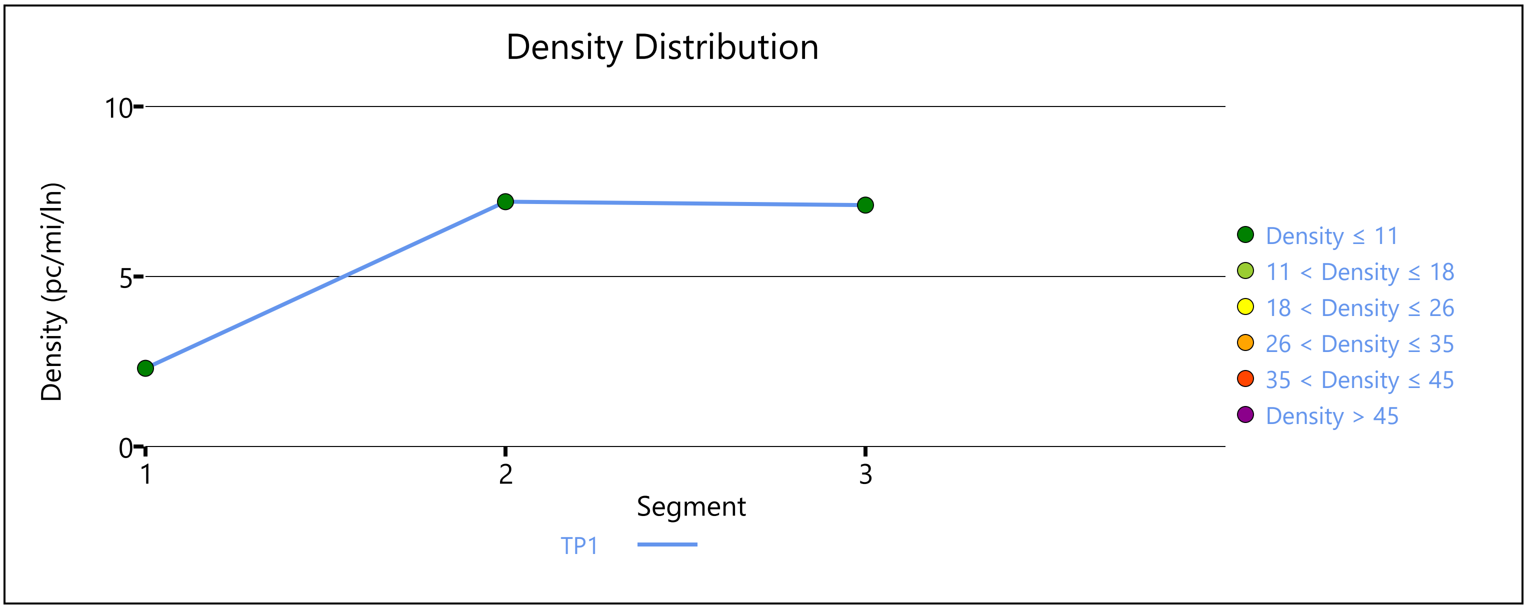

Volume Distribution
1500
1000
500
0
Volume (pc/h)
1
2
3
Segment
TP1


Speed Distribution
55
50
Speed (mi/h)
1
2
3
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
10
5
0
Density (pc/mi/ln)
1
2
3
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	MD
Project Description	NJTP Eastern Spur SB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		2500	3
2	Diverge	Basic	_	1800	3
3	Basic	Basic		2500	3

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.831	1020	6654	0.15	51.8	6.6	A

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.831	0.806	1020	822	6750	4200	0.15	0.20	54.9	55.0	6.2	6.2	A

Segment 3: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.921	201	6654	0.03	51.8	1.3	A

Facility Analysis Results

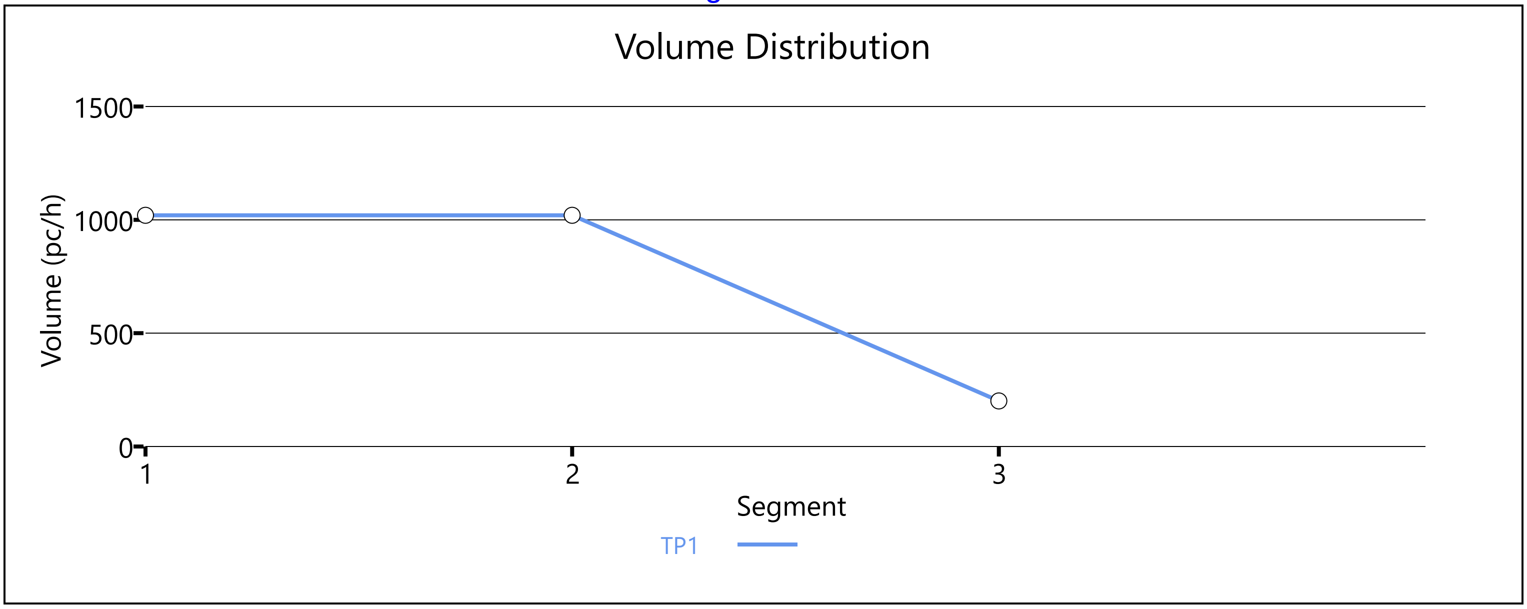
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	52.9	4.6	3.8	1.50	A

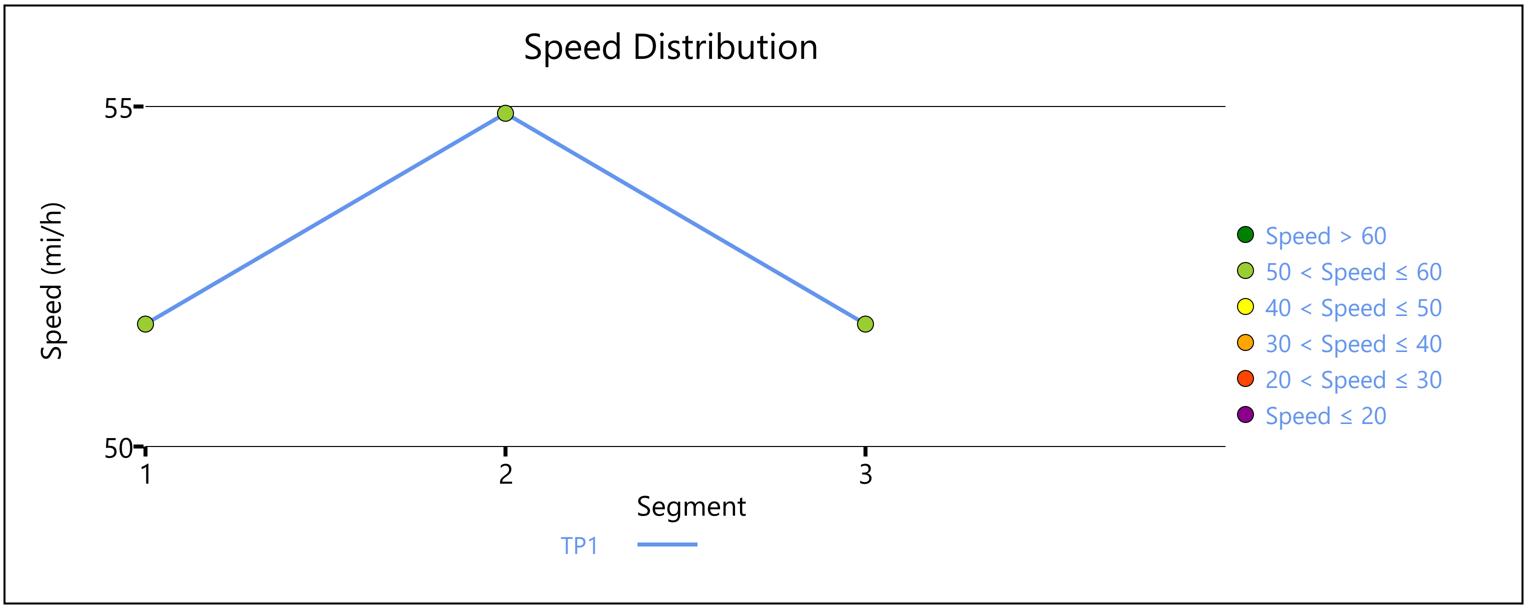
Facility Overall Results

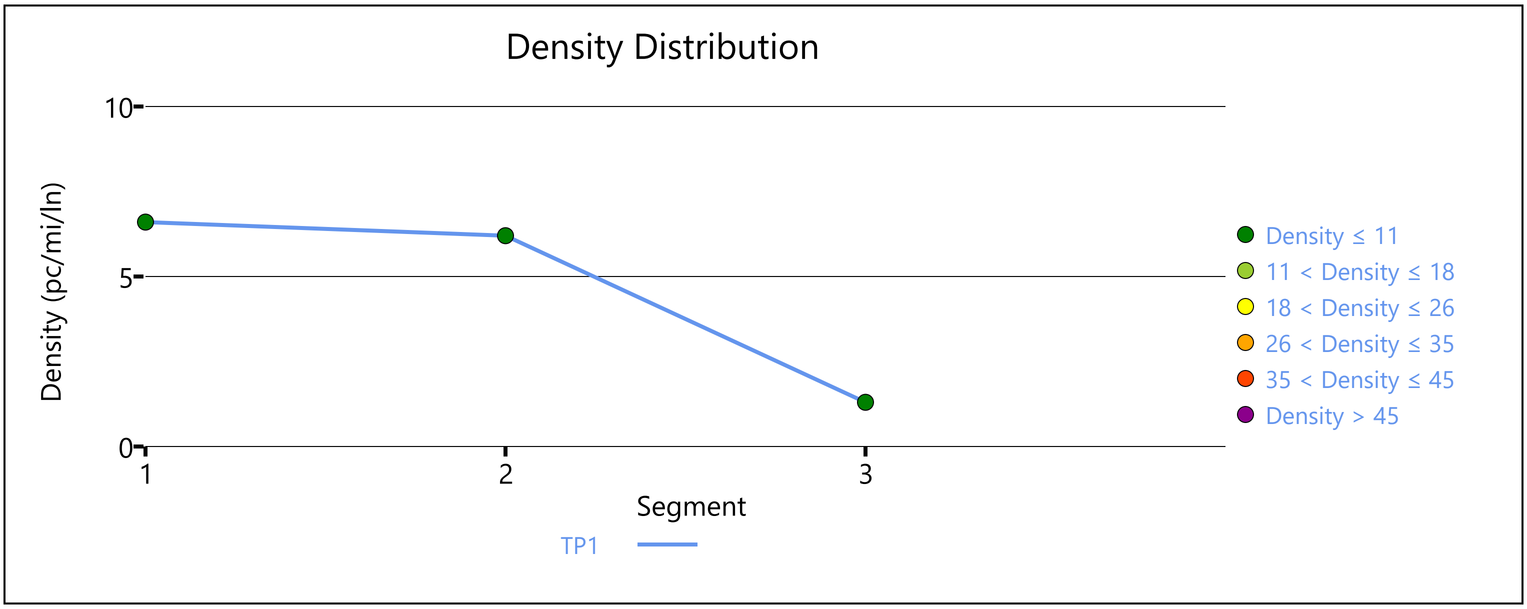
Space Mean Speed, mi/h	52.9	Density, veh/mi/ln	3.8
Average Travel Time, min	1.50	Density, pc/mi/ln	4.6

Messages

WARNING 1	Ramp segment length is longer than 1500 feet for segment 2.







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HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	PM
Project Description	NJTP Eastern Spur NB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.07		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		2500	3
2	Merge	Merge	_	663	3
3	Basic	Basic		2500	3

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.917	578	6654	0.09	51.8	3.7	A

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.917	0.933	1549	971	6750	4000	0.23	0.24	51.8	51.2	10.0	11.1	B

Segment 3: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.928	1548	6654	0.23	51.8	10.0	A

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	51.8	7.2	6.7	1.20	A

Facility Overall Results

Space Mean Speed, mi/h	51.8	Density, veh/mi/ln	6.7
Average Travel Time, min	1.20	Density, pc/mi/ln	7.2

Messages

Comments

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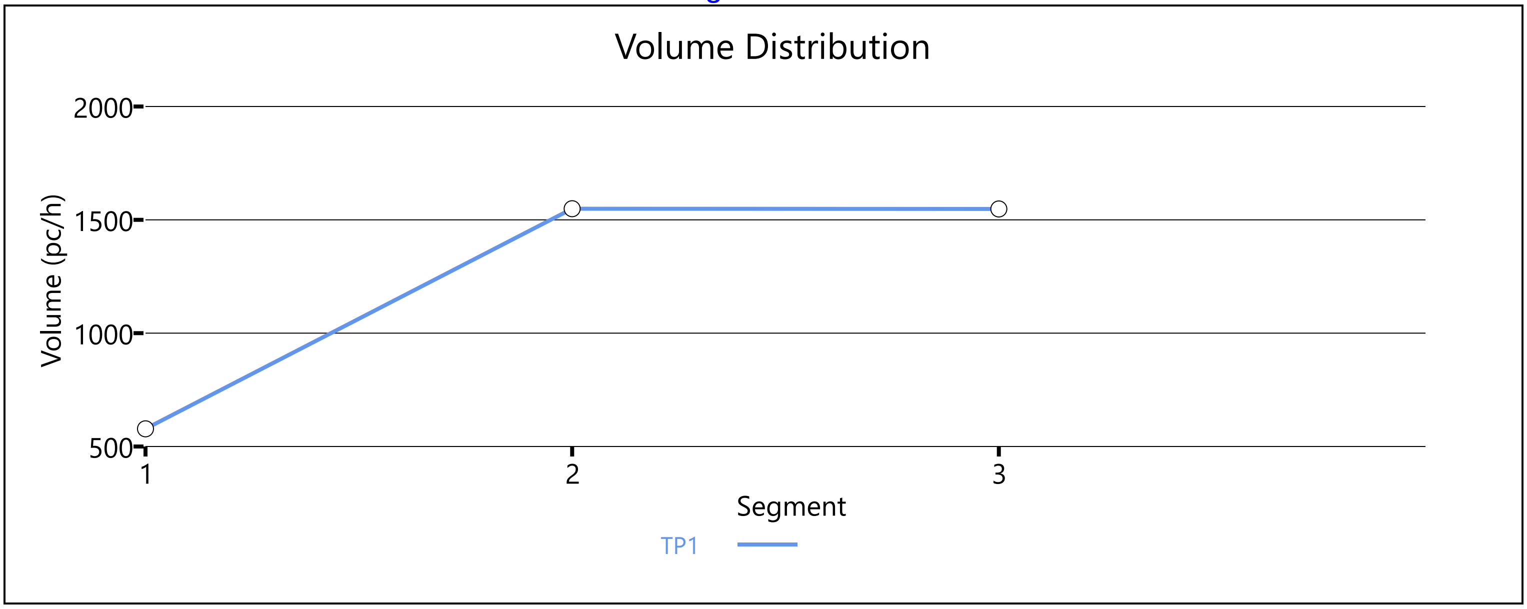

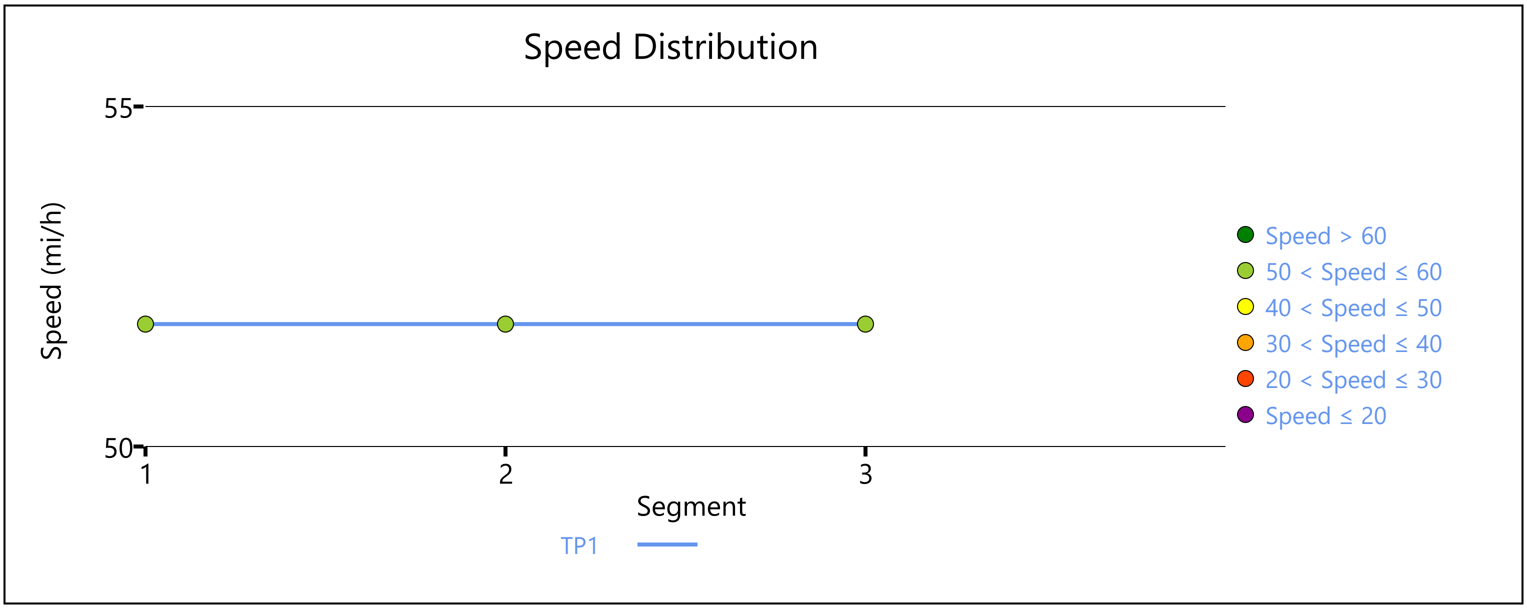

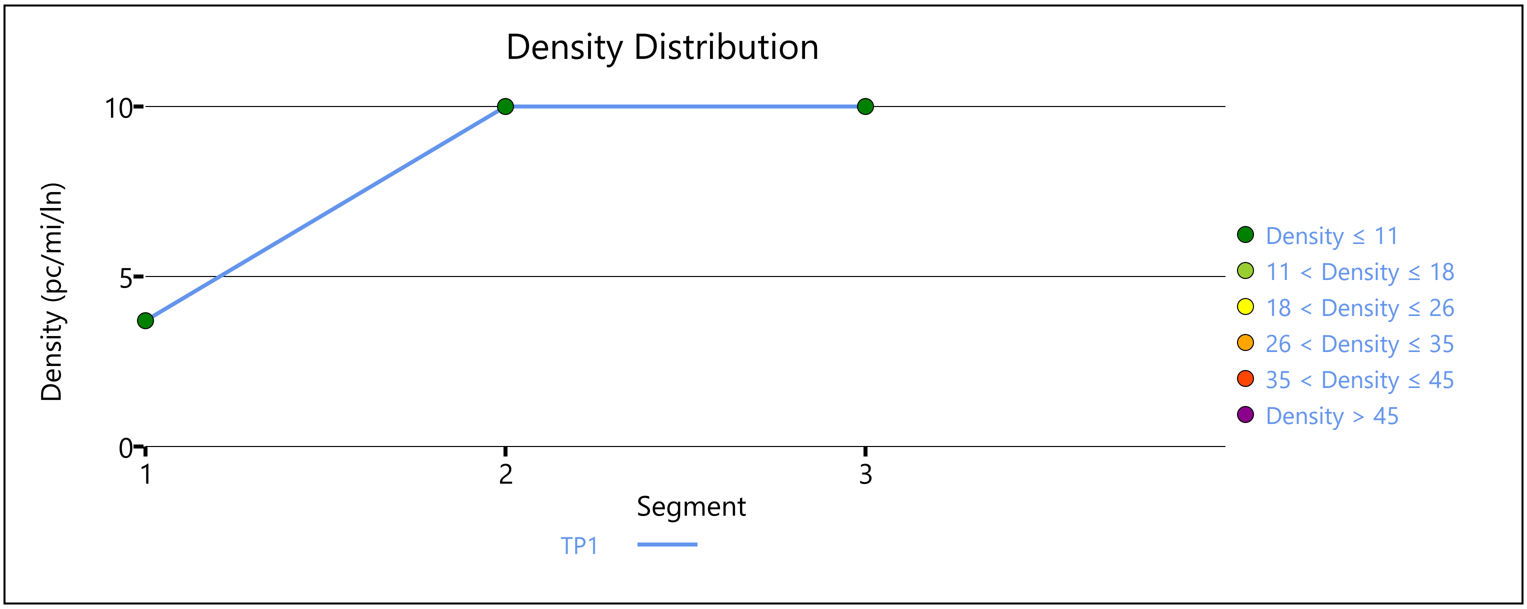

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HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	PM
Project Description	NJTP Eastern Spur SB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		2500	3
2	Diverge	Basic	_	1800	3
3	Basic	Basic		2500	3

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.919	957	6654	0.14	51.8	6.2	A

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.919	0.926	957	903	6750	4200	0.14	0.22	54.9	55.0	5.8	5.8	A

Segment 3: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.808	54	6654	0.01	51.8	0.3	A

Facility Analysis Results

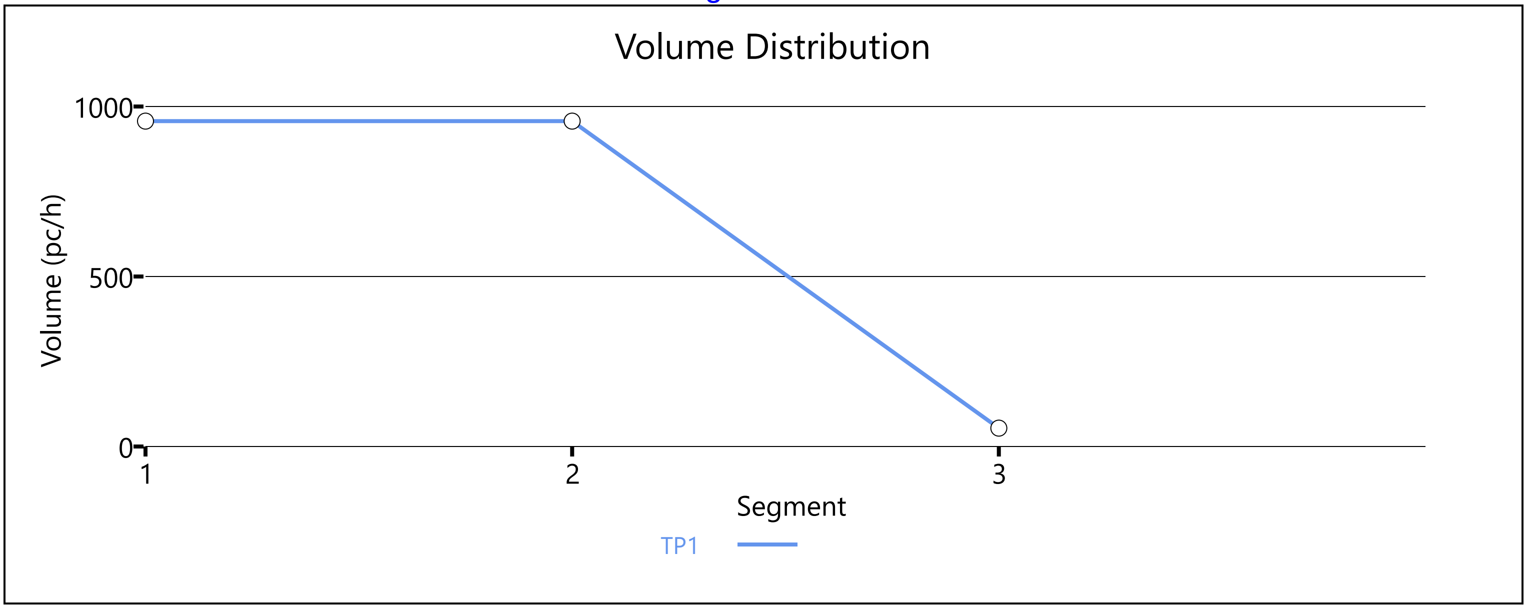
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	53.0	3.9	3.6	1.50	A

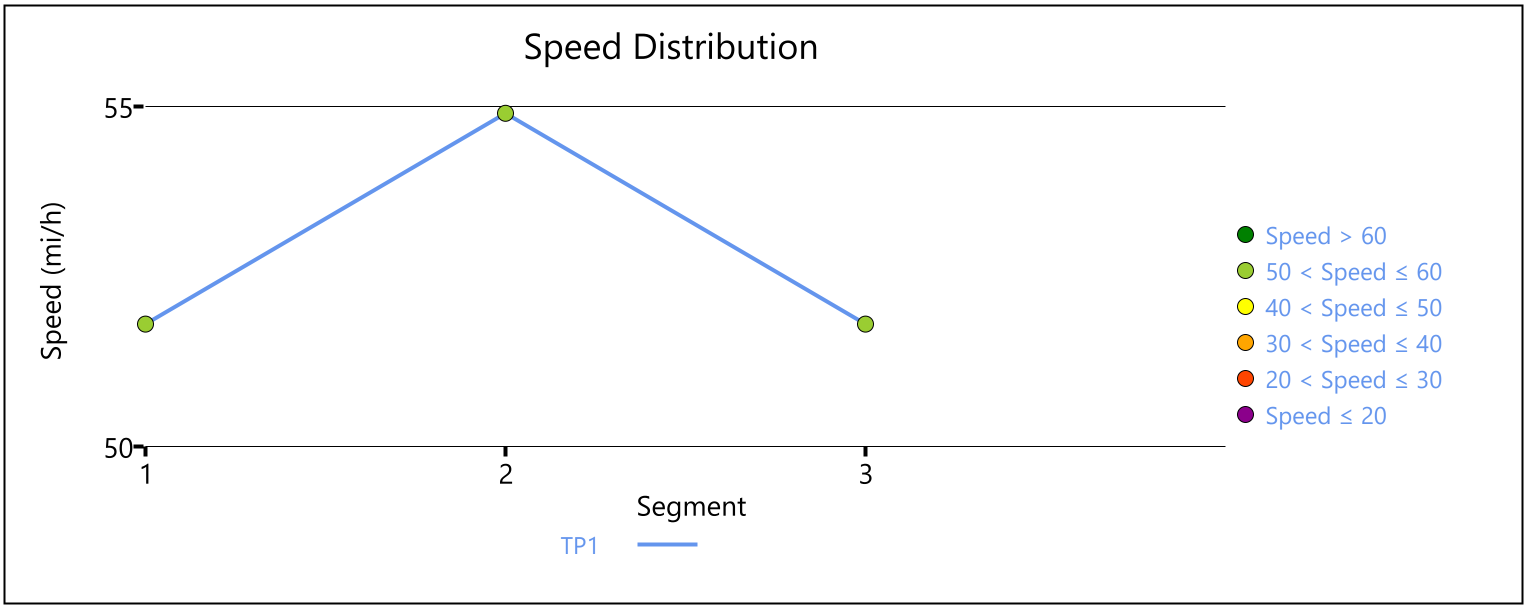
Facility Overall Results

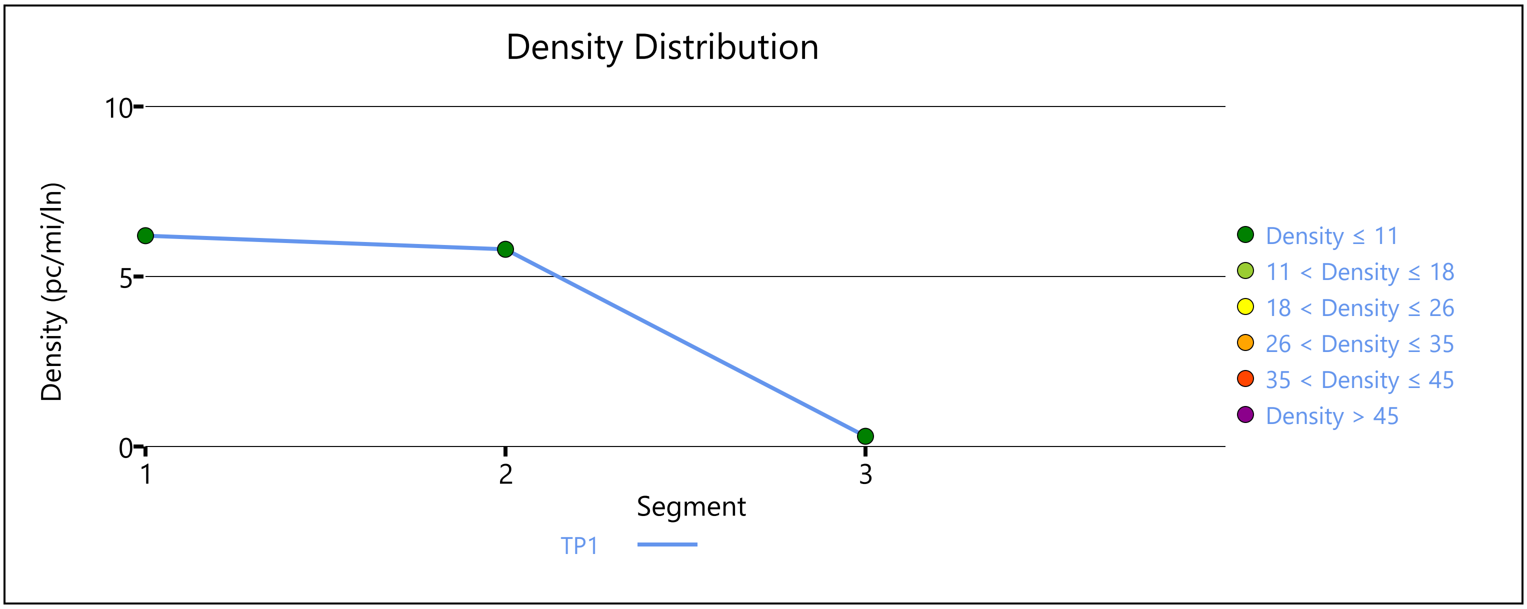
Space Mean Speed, mi/h	53.0	Density, veh/mi/ln	3.6
Average Travel Time, min	1.50	Density, pc/mi/ln	3.9

Messages

WARNING 1	Ramp segment length is longer than 1500 feet for segment 2.


Volume Distribution
1000
500
0
Volume (pc/h)
1
2
3
Segment
TP1


Speed Distribution
55
50
Speed (mi/h)
1
2
3
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
10
5
0
Density (pc/mi/ln)
1
2
3
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	LN
Project Description	NJTP Eastern Spur NB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.07		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		2500	3
2	Merge	Merge	_	663	3
3	Basic	Basic		2500	3

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.733	20	6654	0.00	51.8	0.1	A

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.733	0.904	431	411	6750	4000	0.06	0.10	51.4	51.3	2.8	4.5	A

Segment 3: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.896	431	6654	0.06	51.8	2.8	A

Facility Analysis Results

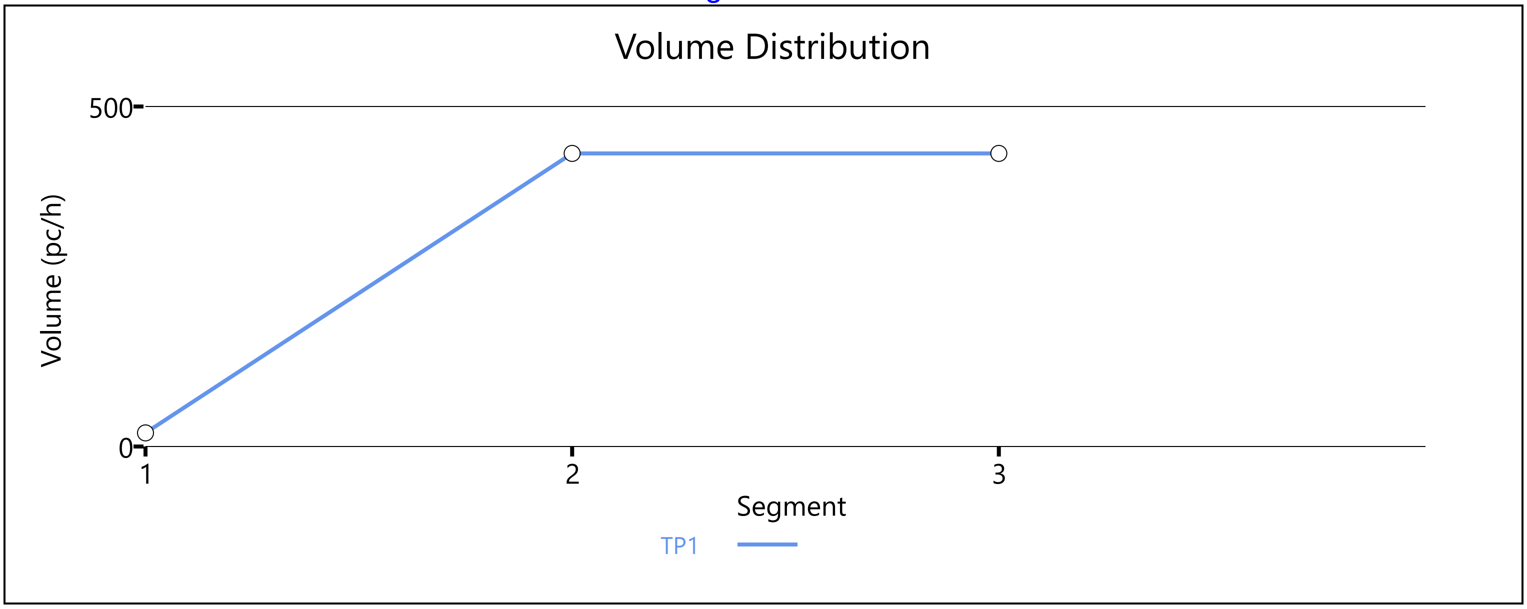
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	51.7	1.6	1.4	1.20	A

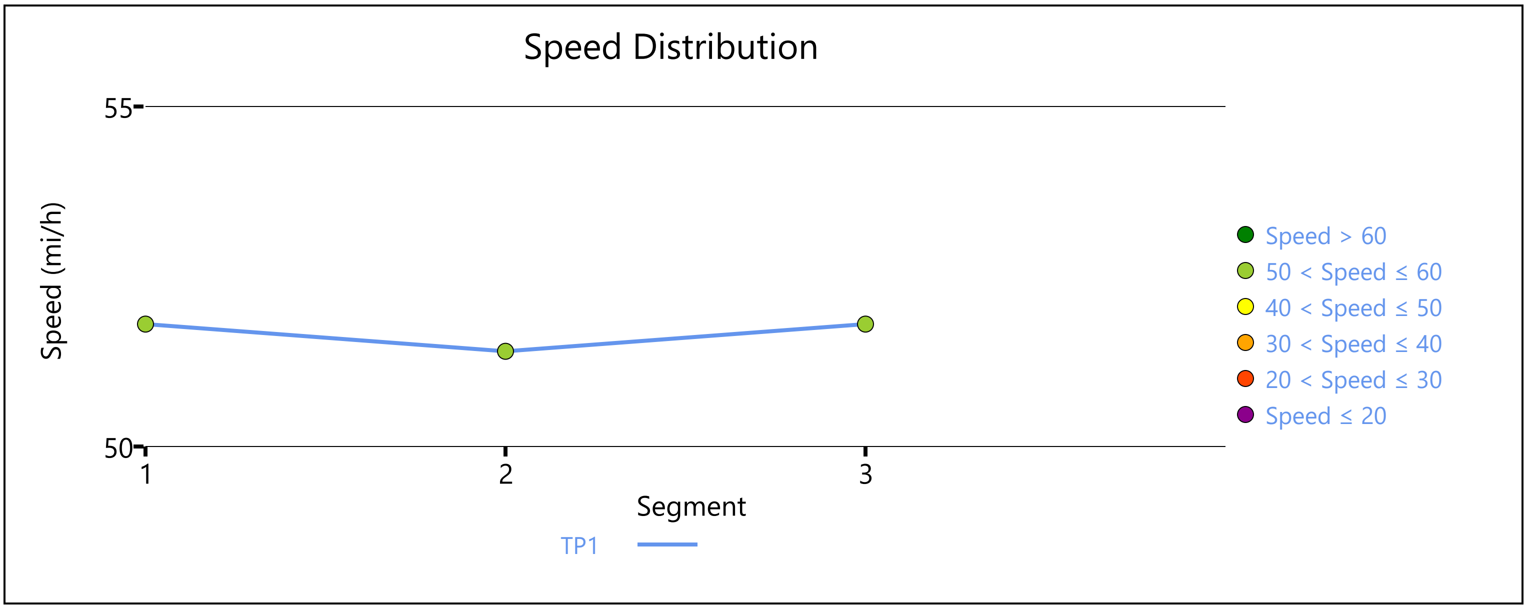
Facility Overall Results

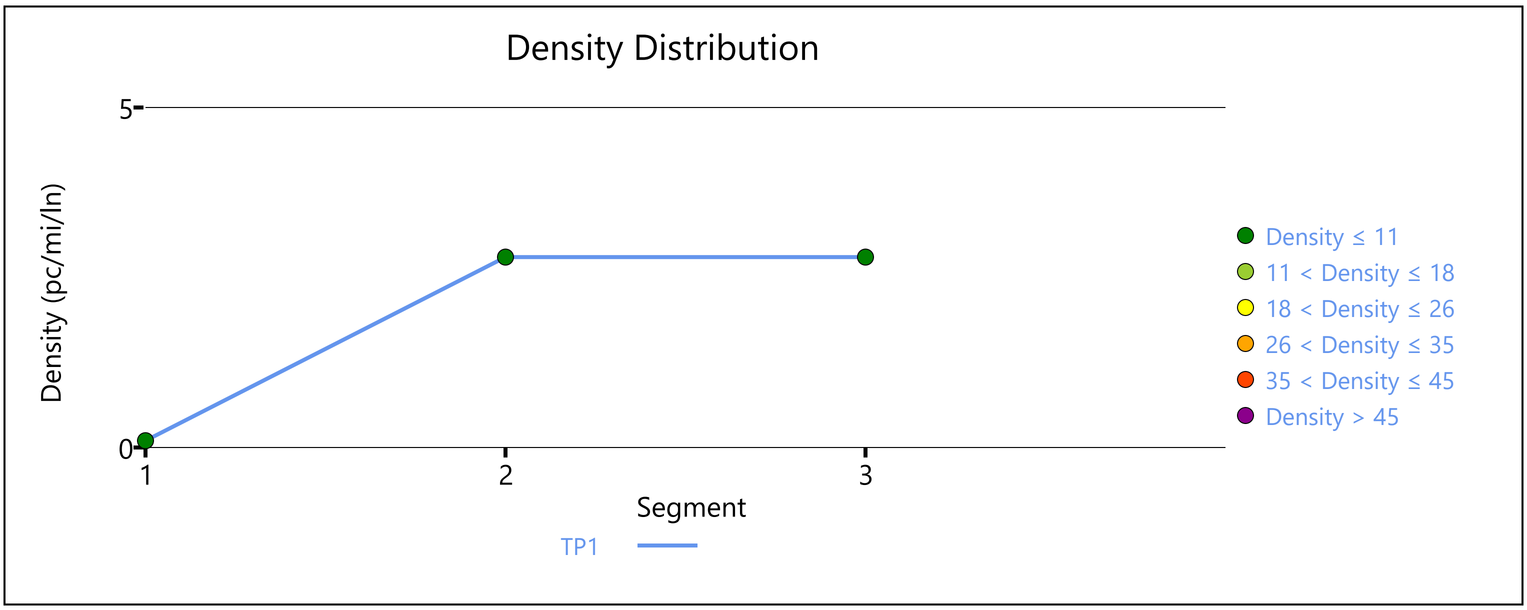
Space Mean Speed, mi/h	51.7	Density, veh/mi/ln	1.4
Average Travel Time, min	1.20	Density, pc/mi/ln	1.6

Messages

Comments


Volume Distribution
500
0
Volume (pc/h)
1
2
3
Segment
TP1


Speed Distribution
55
50
Speed (mi/h)
1
2
3
Segment
TP1
Speed > 60
50 < Speed ≤ 60
40 < Speed ≤ 50
30 < Speed ≤ 40
20 < Speed ≤ 30
Speed ≤ 20


Density Distribution
5
0
Density (pc/mi/ln)
1
2
3
Segment
TP1
Density ≤ 11
11 < Density ≤ 18
18 < Density ≤ 26
26 < Density ≤ 35
35 < Density ≤ 45
Density > 45

HCS7 Freeway Facilities Report

Project Information

Analyst		Date	1/10/2024
Agency	WSP	Analysis Year	adopted toll structure
Jurisdiction		Time Analyzed	LN
Project Description	NJTP Eastern Spur SB	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	3
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	1.29		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic		2500	3
2	Diverge	Basic	_	1800	3
3	Basic	Basic		2500	3

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.899	431	6654	0.06	51.8	2.8	A

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.899	0.906	431	412	6750	4200	0.06	0.10	54.9	55.0	2.6	2.6	A

Segment 3: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.706	20	6654	0.00	51.8	0.1	A

Facility Analysis Results

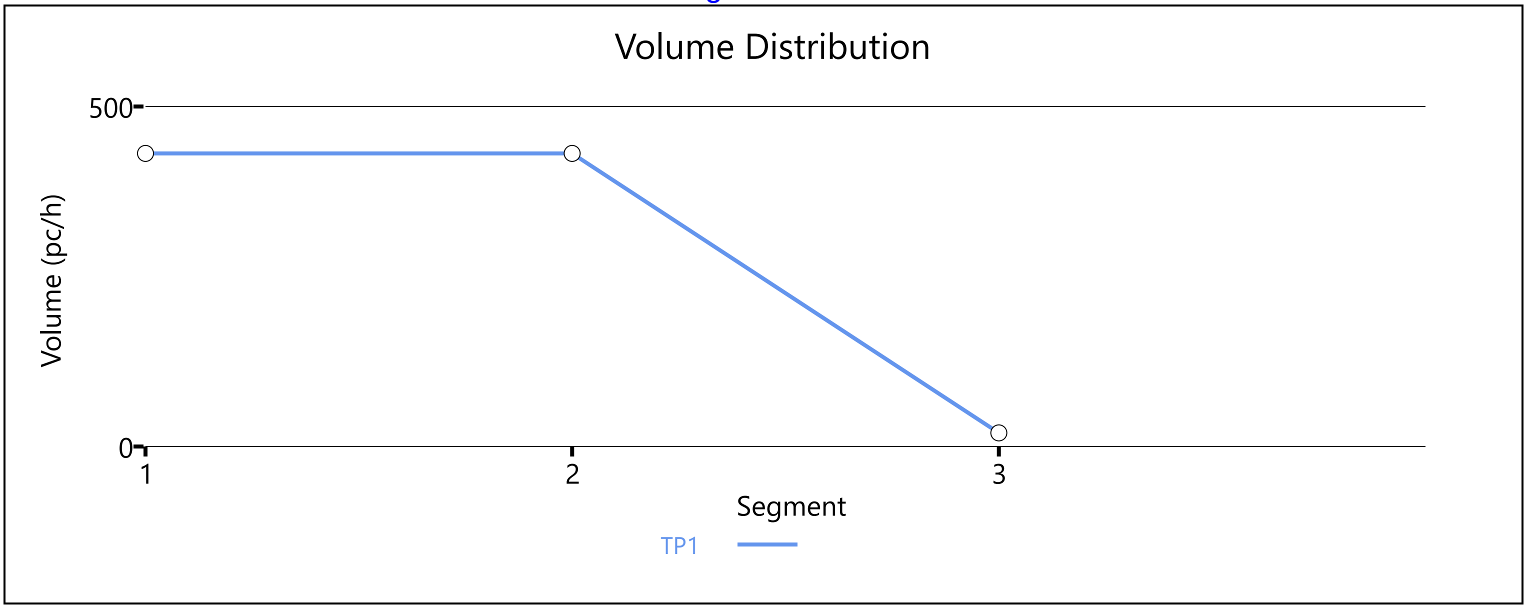
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	53.0	1.8	1.6	1.50	A

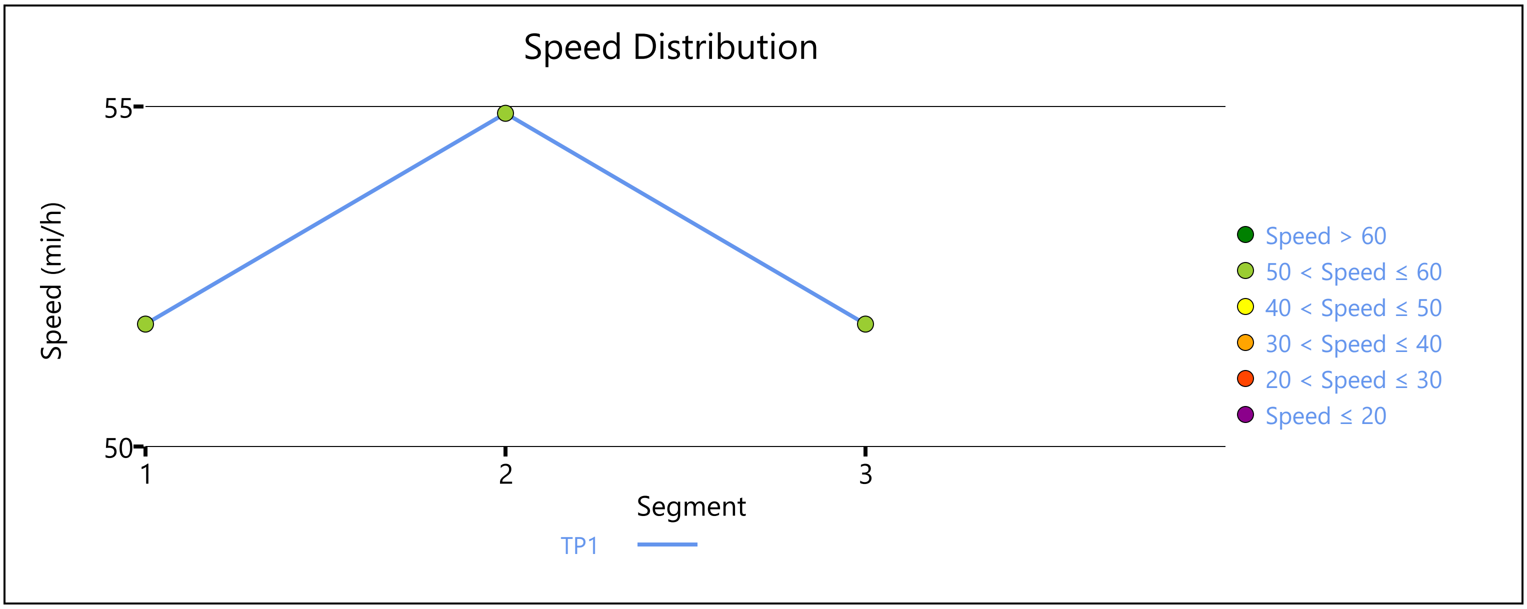
Facility Overall Results

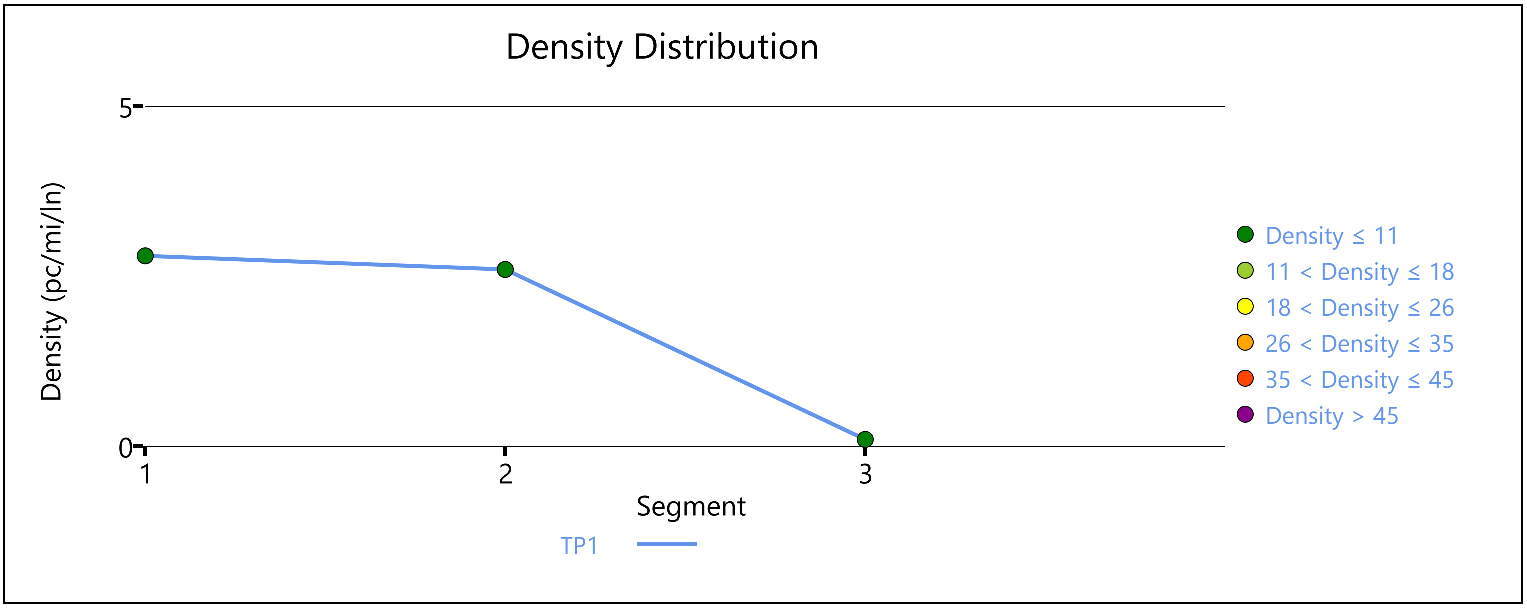
Space Mean Speed, mi/h	53.0	Density, veh/mi/ln	1.6
Average Travel Time, min	1.50	Density, pc/mi/ln	1.8

Messages

WARNING 1	Ramp segment length is longer than 1500 feet for segment 2.







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CENTRAL BUSINESS DISTRICT (CBD) TOLLING PROGRAM

Appendix 4C, Transportation: Supporting Documentation for Transit Analyses

2024

4C-1 LINE HAUL SCREENING RESULTS PER SECTOR

Table 4C-1. Projected New Passenger-Trips at Maximum Load Point for Routes Crossing into the Manhattan CBD at the 60th Street Boundary, (2023 AM Peak Period and Hour) with Adopted Toll Structure Added

MODE	FINAL EA (SCENARIO E)		ADOPTED TOLL STRUCTURE	
	Peak Period	Peak Hour	Peak Period	Peak Hour
Subway				
Broadway				
No. 1	892	232	568	148
No. 2	807	210	505	131
No. 3	530	138	259	67
Lexington Avenue				
No. 4	558	145	336	87
No. 5	348	90	321	83
No. 6	870	226	876	228
Eighth Avenue				
A	690	179	402	104
B	387	101	229	60
C	220	57	109	28
D	636	165	432	112
Second Avenue (Q)	603	157	260	68
Commuter Rail (Metro-North Railroad)				
Harlem	722	311	379	163
Hudson	632	272	198	85
New Haven	494	212	1,017	437
Buses				
York Avenue *(1 route)*	9	2	4	1
Second Avenue *(2 routes)*	48	12	19	7
Lexington Avenue *(4 routes)*	38	10	15	5
Fifth Avenue *(13 routes)*	103	27	36	15
Broadway *(4 routes)*	29	7	11	4
Columbus Avenue *(1 route)*	7	2	3	1
West End Avenue *(1 route)*	8	2	19	7

Source: WSP, Best Practice Model; analysis prepared by WSP and FHI Studio.
Note: MTA NYCT data was used to analyze maximum load points for bus routes as of 2019.

The tolling scenario used to derive this analysis matches the representative tolling scenario in Table 4C-12.

Table 4C-2. Projected Incremental Ridership Increases at Maximum Load Point for Routes Crossing into the Manhattan CBD at the 60th Street Boundary (2023 AM Peak Hour) with Adopted Toll Structure Added

			FINAL EA (SCENARIO E)				ADOPTED TOLL STRUCTURE			
	SCHEDULED TRAINS		NEW PASSENGER-TRIPS		NEW PASSENGER-TRIPS		NEW PASSENGER-TRIPS		NEW PASSENGER-TRIPS	
MODE	Trips/Hour	Trips/Hour	Peak Period	Peak Hour	Per Train	Per Car	Peak Period	Peak Hour	Per Train	Per Car
Commuter Rail (Metro-North Railroad)										
New Haven	21	8	494	229	10.12	1.26	1,017	437	20.82	2.60

Source: WSP, Best Practice Model; analysis prepared by WSP and FHI Studio.

Note: The tolling scenario used to derive this analysis matches the representative tolling scenario in Table 4C-12.

Table 4C-3. Projected New Passenger-Trips at Maximum Load Point for Routes Crossing into the Manhattan CBD from Queens/Roosevelt Island, (2023 AM Peak Hour) with Adopted Toll Structure Added

	FINAL EA (SCENARIO E)		ADOPTED TOLL STRUCTURE	
MODE	PEAK PERIOD	AM PEAK HOUR	PEAK PERIOD	AM PEAK HOUR
Subway				
60th Street Tunnel (R)	657	171	509	132
60th Street Tunnel				
N	386	100	356	93
W	369	96	348	90
53rd Street Tunnel				
M	1,014	264	772	201
E	876	228	669	174
Steinway Tunnel				
No. 7 (Local)	1,449	377	1,140	296
No. 7 (Express)	600	156	602	157
63rd Street Tunnel (F)	1,073	279	865	225
Commuter Rail (Long Island Rail Road)				
Babylon	808	331	264	108
Far Rockaway	147	60	120	49
Hempstead	127	52	97	40
Long Beach	50	20	67	27
Montauk	18	8	4	1
Oyster Bay	32	13	29	12
Port Jefferson	276	113	105	43
Port Washington	368	151	89	36
Ronkonkoma	232	95	54	22
West Hempstead	0	0	0	0
Buses				
Queens-Midtown Tunnel *(33 routes)*	94	25	44	11
Ed Koch Queensboro Bridge *(3 routes)*	41	11	37	13

Source: WSP, Best Practice Model; analysis prepared by WSP and FHI Studio.
Note: The tolling scenario used to derive this analysis matches the representative tolling scenario in Table 4C-15. The projected ridership changes have been rounded to zero (0) for estimates at or below zero, to account for variability/noise in the BPM for lines where existing ridership is already relatively low. MTA NYCT data was used to analyze maximum load points for bus routes as of 2019.

Table 4C-4. Projected New Passenger-Trips at Maximum Load Point for Routes Crossing into the Manhattan CBD from Brooklyn (2023 AM Peak Period and Hour) with Adopted Toll Structure Added

	FINAL EA (SCENARIO E)		ADOPTED TOLL STRUCTURE	
MODE	AM PEAK PERIOD	AM PEAK HOUR	AM PEAK PERIOD	AM PEAK HOUR
Subway				
Clark Street Tunnel				
No. 2	165	43	332	86
No. 3	345	90	285	74
Joralemon Street Tunnel				
No. 4	664	173	613	159
No. 5	588	153	565	147
Cranberry Street Tunnel				
A	859	224	731	190
C	334	87	255	66
Rutgers Street Tunnel (F)	1,033	269	706	184
Canarsie Tunnel (L)	976	254	787	205
Williamsburg Bridge				
J	674	175	582	151
M	502	130	381	99
Manhattan Bridge				
B	616	160	459	119
D	867	226	815	212
N	634	165	610	159
Q	685	178	547	142
Montague Street Tunnel (R)	640	166	561	146
Buses				
Hugh L. Carey Tunnel *(6 routes)*	45	12	21	5
Williamsburg Bridge *(1 route)*	0	0	0	0

Source: WSP, Best Practice Model; analysis prepared by WSP and FHI Studio.
Note: MTA NYCT data was used to analyze maximum load points for bus routes as of 2019. The tolling scenario used to derive this analysis matches the representative tolling scenario in Table 4C-18.

Table 4C-5. Projected New Passenger-Trips at Maximum Load Point for Staten Island Express Bus Routes (2023 AM Peak Period and Hour) with Adopted Toll Structure Added

MODE	FINAL EA (SCENARIO E) AM PEAK PERIOD	FINAL EA (SCENARIO E) AM PEAK HOUR	ADOPTED TOLL STRUCTURE AM PEAK PERIOD	ADOPTED TOLL STRUCTURE AM PEAK HOUR
Bus				
Staten Island express via Hugh L. Carey Tunnel *(16 routes)*	447	116	403	105
Staten Island express via Lincoln Tunnel *(5 routes)*	66	17	37	10

Source: WSP, Best Practice Model; analysis prepared by WSP and FHI Studio.
Note: MTA NYCT data was used to analyze maximum load points for bus routes as of 2019. The tolling scenario used to derive this analysis matches the representative tolling scenario in Table 4C-21.

Table 4C-6. Projected New Passenger-Trips at Maximum Load Point for Routes Crossing into the Manhattan CBD from New Jersey/West of Hudson (2023 AM Peak Period and Peak Hour) with Adopted Toll Structure Added

MODE	FINAL EA (SCENARIO E) AM PEAK PERIOD	FINAL EA (SCENARIO E) AM PEAK HOUR	ADOPTED TOLL STRUCTURE AM PEAK PERIOD	ADOPTED TOLL STRUCTURE AM PEAK HOUR
Subway				
PATH (33rd Street)				
Hoboken Line	898	234	513	133
Journal Square Line	657	171	463	120
PATH (World Trade Center)				
Hoboken Line	605	157	327	85
Newark Line	596	155	468	122
Commuter Rail (NJ TRANSIT)*				
Montclair-Boonton Line	305	125	256	110
Morris & Essex Line	273	112	215	92
Northeast Corridor Line	420	172	136	59
North Jersey Coast Line	309	127	102	44
Buses				
Lincoln Tunnel (104 routes)	1,462	380	804	209
Holland Tunnel (13 routes)	91	24	126	33

Source: WSP, Best Practice Model; analysis prepared by WSP and FHI Studio.
Note: The tolling scenario used to derive this analysis matches the representative tolling scenario in Table 4C-23.

* Metro-North west-of-Hudson commuter trains (Port Jervis, Pascack Valley) transfer at Secaucus Junction to enter the Manhattan CBD and are therefore incorporated into NJ TRANSIT incremental passenger-trips

4C-2 LEVEL OF SERVICE TABLES – NEW YORK CITY

NOTE: Tables are arranged in alphabetical order by station.

Table 4C-7. Final EA (Scenario E): Court Square-23rd Street Station (E, M, G, and No. 7 lines) – Stair Analysis (AM Peak Hour)

SUBWAY STAIR	LOCATION	ACTUAL WIDTH (FT)	EFFECTIVE WIDTH (FT)	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR		V/C RATIO	LOS
				In to Station	Out from Station	In to Station	Out from Station		In to Station	Out from Station		
QBL M3/S3	Street stair at southeast corner of 21st Street and 44th Drive	5.00	4.00	300	207	94	65	90%	90%	80%	0.34	A
QBL M4/S4	Street stair at northeast corner of 21st Street and 44th Drive	5.00	4.00	481	305	150	95	90%	90%	80%	0.53	B
QBL O6/O7	Street stair at southeast corner of 23rd Street and 44th Drive	10.00	8.50	540	313	169	98	90%	90%	80%	0.27	A
XTN M1/S1	Street stair at northeast corner of Jackson Avenue and Pearson Street	5.00	4.00	52	45	16	14	90%	90%	80%	0.07	A
XTN M3/S3	Street stair at southwest corner of Jackson Avenue and Court Square	5.50	4.50	241	537	75	168	90%	90%	80%	0.48	B
XTN O1/O2	Street stair at northeast corner of Jackson Avenue and 45th Avenue	9.00	7.75	225	294	70	92	90%	90%	80%	0.18	A
O3/O4	Stair in Citicorp Building/One Court Square	9.00	7.75	13	30	4	9	90%	90%	80%	0.02	A
FLU M1/S1	Street stair at southeast corner of Jackson Avenue and 23rd Street	8.00	6.75	162	110	51	34	90%	90%	80%	0.11	A
FLU M2/S2	Street stair at northwest corner of 23rd Street and 45th Road	5.00	4.00	222	151	69	47	90%	90%	80%	0.25	A
QBL P1	Connecting stair between N308 paid zone and Queens-bound E/M platform	14.00	12.75	668	1,288	209	403	90%	80%	75%	0.46	B
QBL P2	Connecting stair between N308 paid zone and Manhattan-bound E/M platform	14.00	12.75	4,343	1,597	1,357	499	90%	80%	75%	1.37	E
QBL P3	Connecting stair between N307 paid zone and Queens-bound E/M platform	11.00	9.75	60	245	19	77	90%	80%	75%	0.10	A
QBL P4	Connecting stair between N307 paid zone and Manhattan-bound E/M platform	11.00	9.75	738	264	231	83	90%	80%	75%	0.30	A
FLU P1/P3	Connecting stair between R508 paid zone and Queens-bound 7 platform	8.00	6.75	732	918	229	287	90%	80%	75%	0.73	C
FLU P2/P4	Connecting stair between R508 paid zone and Manhattan-bound 7 platform	7.50	6.25	1767	2188	552	684	90%	80%	75%	1.90	F+
O3/O4/O5	Connecting stair between 7 train mezzanine and G train mezzanine	7.00	6.00	208	880	65	275	90%	80%	80%	0.52	B
XTN P1	Connecting stair between N400C paid zone and G train platform	8.75	7.50	1,434	335	448	105	90%	80%	75%	0.69	B
XTN P2	Connecting stair between N400 paid zone and G train platform	9.25	8.00	710	1,145	222	358	90%	80%	75%	0.70	B
XTN P3	Connecting stair between N400 paid zone and G train platform	9.25	8.00	657	1,910	205	597	90%	80%	75%	0.97	C
XTN P5	Connecting stair between N400B paid zone and G train platform	7.00	6.00	10	604	3	189	100%	80%	75%	0.28	A
XTN P6	Connecting stair between N400B paid zone and G train platform	9.25	8.00	57	945	18	295	90%	80%	75%	0.39	A
XTN P7	Connecting stair between N400C paid zone and G train platform	9.25	8.00	160	1,006	50	314	90%	80%	75%	0.45	A
QBL M1	Connecting stair between E/M platforms and N308 paid zone	13.00	11.75	4,343	1,597	1,357	499	90%	80%	80%	1.46	E

NOTE: + denotes a significant adverse effect

Table 4C-8. Final EA (Scenario E): Court Square-23rd Street Station (E, M, G, and No. 7 lines) – Escalator Analysis (AM Peak Hour)

SUBWAY STAIR	LOCATION	QUANTITY	TREAD WIDTH (IN)	SURGE FACTOR	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		PEAK 15-MINUTE CAPACITY (WITHOUT SURGING FACTOR)	V/C RATIO	LOS
					In to Station	Out from Station	In to Station	Out from Station			
E265	Exiting Escalator below Citicorp Building/One Court Square	1	32	90%	157	0	49	0	750	0.07	A
E266	Exiting Escalator below Citicorp Building/One Court Square	1	32	90%	0	324	0	101	750	0.15	A
E461X	Connecting escalator between 7 train mezzanine and G train mezzanine	1	40	90%	0	1,703	0	532	1,050	0.56	B
E462X	Connecting escalator between 7 train mezzanine and G train mezzanine	1	40	90%	2,253	0	704	0	1,050	0.74	C

Table 4C-9. Final EA (Scenario E): Court Square-23rd Street Station (E, M, G, and No. 7 lines) – Fare Array Area Analysis (AM Peak Hour)

FARE ARRAY ELEMENT	QUANTITY	CAPACITY		PEAK HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR (OUT)	V/C RATIO	LOS
		In to Station	Out from Station	In to Station	Out from Station	In to Station	Out from Station				
21st Street and 44th Drive - northeast corner (N307)											
Two-Way Turnstiles	4	1,680	2,580	781	307	244	96	90%	80%	0.21	A
21st Street and 44th Drive – southeast corner (N307A)											
High Exit Only Turnstile	2	0	1,110	0	208	0	65	100%	80%	0.07	A
23rd Street and 44th Road – northeast corner (N308)											
Two-Way Turnstiles	4	1,680	2,580	540	313	169	98	90%	75%	0.17	A
Jackson Avenue and Pearson Street – northeast corner (N400C)											
HEET	2	510	1,080	52	45	16	14	90%	80%	0.05	A
Jackson Avenue and Court Square – southwest corner (N400)											
Two-Way Turnstiles	3	1,260	1,935	241	537	75	168	90%	80%	0.19	A
Jackson Avenue and 45th Avenue – northeast corner (N400B)											
Two-Way Turnstiles	3	1,260	1,935	225	294	70	92	90%	80%	0.13	A
Citicorp Building/One Court Square (N400A)											
Two-Way Turnstiles	7	2,940	4,515	170	354	53	111	90%	80%	0.05	A
Jackson Avenue and 23rd Street – southeast corner (R508)											
Two-Way Turnstiles	6	2,520	3,870	384	261	120	82	90%	80%	0.08	A

Table 4C-10. Final EA (Scenario E): Court Square-23rd Street Station (E, M, G, and No. 7 lines) – Stair Analysis (PM Peak Hour)

SUBWAY STAIR	LOCATION	ACTUAL WIDTH (FT)	EFFECTIVE WIDTH (FT)	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR		V/C RATIO	LOS
				In to Station	Out from Station	In to Station	Out from Station		In to Station	Out from Station		
QBL M3/S3	Street stair at southeast corner of 21st Street and 44th Drive	5.00	4.00	182	373	57	117	90%	90%	80%	0.39	A
QBL M4/S4	Street stair at northeast corner of 21st Street and 44th Drive	5.00	4.00	442	167	138	52	90%	90%	80%	0.40	A
QBL O6/O7	Street stair at southeast corner of 23rd Street and 44th Drive	10.00	8.50	383	220	120	69	90%	90%	80%	0.19	A
XTN M1/S1	Street stair at northeast corner of Jackson Avenue and Pearson Street	5.00	4.00	52	40	16	13	90%	90%	80%	0.06	A
XTN M3/S3	Street stair at southwest corner of Jackson Avenue and Court Square	5.50	4.50	446	266	139	83	90%	90%	80%	0.43	A
XTN O1/O2	Street stair at northeast corner of Jackson Avenue and 45th Avenue	9.00	7.75	339	110	106	34	90%	90%	80%	0.15	A
O3/O4	Stair in Citicorp Building/One Court Square	9.00	7.75	96	280	30	88	90%	90%	80%	0.14	A
FLU M1/S1	Street stair at southeast corner of Jackson Avenue and 23rd Street	8.00	6.75	398	148	124	46	90%	90%	80%	0.21	A
FLU M2/S2	Street stair at northwest corner of 23rd Street and 45th Road	5.00	4.00	358	170	112	53	90%	90%	80%	0.35	A
QBL P1	Connecting stair between N308 paid zone and Queens-bound E/M platform	14.00	12.75	1,357	1,826	424	571	90%	80%	75%	0.75	C
QBL P2	Connecting stair between N308 paid zone and Manhattan-bound E/M platform	14.00	12.75	1,811	639	566	200	90%	80%	75%	0.57	B
QBL P3	Connecting stair between N307 paid zone and Queens-bound E/M platform	11.00	9.75	215	434	67	136	90%	80%	75%	0.20	A
QBL P4	Connecting stair between N307 paid zone and Manhattan-bound E/M platform	11.00	9.75	414	144	129	45	90%	80%	75%	0.17	A
FLU P1/P3	Connecting stair between R508 paid zone and Queens-bound 7 platform	8.00	6.75	1,865	1,204	583	376	90%	80%	75%	1.35	E
FLU P2/P4	Connecting stair between R508 paid zone and Manhattan-bound 7 platform	7.50	6.25	848	948	265	296	90%	80%	75%	0.86	C
O3/O4/O5	Connecting stair between 7 train mezzanine and G train mezzanine	7.00	6.00	123	459	38	143	90%	80%	80%	0.28	A
XTN P1	Connecting stair between N400C paid zone and G train platform	8.75	7.50	2,415	199	755	62	90%	80%	75%	1.01	D
XTN P2	Connecting stair between N400 paid zone and G train platform	9.25	8.00	1,188	691	371	216	90%	80%	75%	0.70	B
XTN P3	Connecting stair between N400 paid zone and G train platform	9.25	8.00	1,100	1,152	344	360	90%	80%	75%	0.84	C
XTN P5	Connecting stair between N400B paid zone and G train platform	7.00	6.00	17	363	5	113	100%	80%	75%	0.17	A
XTN P6	Connecting stair between N400B paid zone and G train platform	9.25	8.00	96	569	30	178	90%	80%	75%	0.25	A
XTN P7	Connecting stair between N400C paid zone and G train platform	9.25	8.00	268	596	84	186	90%	80%	75%	0.33	A
QBL M1	Connecting stair between E/M platforms and N308 paid zone	13.00	11.75	1,811	639	566	200	90%	80%	80%	0.60	B

Table 4C-11. Final EA (Scenario E): Court Square-23rd Street Station (E, M, G, and No. 7 lines) – Escalator Analysis (PM Peak Hour)

SUBWAY STAIR	LOCATION	QUANTITY	TREAD WIDTH (IN)	SURGE FACTOR	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		PEAK 15-MINUTE CAPACITY (WITHOUT SURGING FACTOR)	V/C RATIO	LOS
					In to Station	Out from Station	In to Station	Out from Station			
E265	Exiting Escalator below Citicorp Building/One Court Square	1	32	90%	239	0	75	0	750	0.11	A
E266	Exiting Escalator below Citicorp Building/One Court Square	1	32	90%	0	209	0	65	750	0.10	A
E461X	Connecting escalator between 7 train mezzanine and G train mezzanine	1	40	90%	0	1,824	0	570	1,050	0.60	B
E462X	Connecting escalator between 7 train mezzanine and G train mezzanine	1	40	90%	1,922	0	601	0	1,050	0.64	B

Table 4C-12. Final EA (Scenario E): Court Square-23rd Street Station (E, M, G, and No. 7 lines) – Fare Array Area Analysis (PM Peak Hour)

FARE ARRAY ELEMENT	QUANTITY	CAPACITY		PEAK HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR (OUT)	V/C RATIO	LOS
		In to Station	Out from Station	In to Station	Out from Station	In to Station	Out from Station				
21st Street and 44th Drive - northeast corner (N307)											
Two-Way Turnstiles	4	1,680	2,580	624	176	195	55	90%	80%	0.16	A
21st Street and 44th Drive – southeast corner (N307A)											
High Exit Only Turnstile	2	0	1,110	0	394	0	123	100%	80%	0.14	A
23rd Street and 44th Road – northeast corner (N308)											
Two-Way Turnstiles	4	1,680	2,580	383	220	120	69	90%	75%	0.12	A
Jackson Avenue and Pearson Street – northeast corner (N400C)											
HEET	2	510	1,080	52	40	16	13	90%	80%	0.05	A
Jackson Avenue and Court Square – southwest corner (N400)											
Two-Way Turnstiles	3	1,260	1,935	446	288	139	90	90%	80%	0.19	A
Jackson Avenue and 45th Avenue – northeast corner (N400B)											
Two-Way Turnstiles	3	1,260	1,935	339	110	106	34	90%	80%	0.12	A
Citicorp Building/One Court Square (N400A)											
Two-Way Turnstiles	7	2,940	4,515	334	489	104	153	90%	80%	0.09	A
Jackson Avenue and 23rd Street – southeast corner (R508)											
Two-Way Turnstiles	6	2,520	3,870	756	318	236	99	90%	80%	0.14	A

Table 4C-13. Adopted Toll Structure: Court Square-23rd Street Station (E, M, G, and No. 7 lines) – Stair Analysis (AM Peak Hour)

SUBWAY STAIR	LOCATION	ACTUAL WIDTH (FT)	EFFECTIVE WIDTH (FT)	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR		V/C RATIO	LOS
				In to Station	Out from Station	In to Station	Out from Station		In to Station	Out from Station		
QBL M3/S3	Street stair at southeast corner of 21st Street and 44th Drive	5.00	4.00	298	208	93	65	90%	90%	80%	0.34	A
QBL M4/S4	Street stair at northeast corner of 21st Street and 44th Drive	5.00	4.00	478	306	149	96	90%	90%	80%	0.53	B
QBL O6/O7	Street stair at southeast corner of 23rd Street and 44th Drive	10.00	8.50	538	314	168	98	90%	90%	80%	0.27	A
XTN M1/S1	Street stair at northeast corner of Jackson Avenue and Pearson Street	5.00	4.00	52	46	16	14	90%	90%	80%	0.07	A
XTN M3/S3	Street stair at southwest corner of Jackson Avenue and Court Square	5.50	4.50	240	540	75	169	90%	90%	80%	0.48	B
XTN O1/O2	Street stair at northeast corner of Jackson Avenue and 45th Avenue	9.00	7.75	224	296	70	93	90%	90%	80%	0.19	A
O3/O4	Stair in Citicorp Building/One Court Square	9.00	7.75	13	30	4	9	90%	90%	80%	0.02	A
FLU M1/S1	Street stair at southeast corner of Jackson Avenue and 23rd Street	8.00	6.75	161	110	50	34	90%	90%	80%	0.11	A
FLU M2/S2	Street stair at northwest corner of 23rd Street and 45th Road	5.00	4.00	221	152	69	48	90%	90%	80%	0.25	A
QBL P1	Connecting stair between N308 paid zone and Queens-bound E/M platform	14.00	12.75	663	1294	207	404	90%	80%	75%	0.46	B
QBL P2	Connecting stair between N308 paid zone and Manhattan-bound E/M platform	14.00	12.75	4328	1598	1,353	499	90%	80%	75%	1.37	E
QBL P3	Connecting stair between N307 paid zone and Queens-bound E/M platform	11.00	9.75	60	248	19	78	90%	80%	75%	0.10	A
QBL P4	Connecting stair between N307 paid zone and Manhattan-bound E/M platform	11.00	9.75	734	263	229	82	90%	80%	75%	0.30	A
FLU P1/P3	Connecting stair between R508 paid zone and Queens-bound 7 platform	8.00	6.75	730	914	228	286	90%	80%	75%	0.73	C
FLU P2/P4	Connecting stair between R508 paid zone and Manhattan-bound 7 platform	7.50	6.25	1753	2194	548	686	90%	80%	75%	1.90	F+
O3/O4/O5	Connecting stair between 7 train mezzanine and G train mezzanine	7.00	6.00	208	876	65	274	90%	80%	80%	0.52	B
XTN P1	Connecting stair between N400C paid zone and G train platform	8.75	7.50	1450	334	453	104	90%	80%	75%	0.70	B
XTN P2	Connecting stair between N400 paid zone and G train platform	9.25	8.00	714	1144	223	358	90%	80%	75%	0.70	C
XTN P3	Connecting stair between N400 paid zone and G train platform	9.25	8.00	661	1909	207	597	90%	80%	75%	0.98	C
XTN P5	Connecting stair between N400B paid zone and G train platform	7.00	6.00	10	604	3	189	100%	80%	75%	0.28	A
XTN P6	Connecting stair between N400B paid zone and G train platform	9.25	8.00	58	944	18	295	90%	80%	75%	0.39	A
XTN P7	Connecting stair between N400C paid zone and G train platform	9.25	8.00	162	1004	51	314	90%	80%	75%	0.45	A
QBL M1	Connecting stair between E/M platforms and N308 paid zone	13.00	11.75	4328	1598	1,353	499	90%	80%	80%	1.46	E

NOTE: + denotes a significant adverse effect

Table 4C-14. Adopted Toll Structure: Court Square-23rd Street Station (E, M, G, and No. 7 lines) – Escalator Analysis (AM Peak Hour)

SUBWAY STAIR	LOCATION	QUANTITY	TREAD WIDTH (IN)	SURGE FACTOR	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		PEAK 15-MINUTE CAPACITY (WITHOUT SURGING FACTOR)	V/C RATIO	LOS
					In to Station	Out from Station	In to Station	Out from Station			
E265	Exiting Escalator below Citicorp Building/One Court Square	1	32	90%	157	0	49	0	750	0.07	A
E266	Exiting Escalator below Citicorp Building/One Court Square	1	32	90%	0	325	0	102	750	0.15	A
E461X	Connecting escalator between 7 train mezzanine and G train mezzanine	1	40	90%	0	1694	0	529	1,050	0.56	B
E462X	Connecting escalator between 7 train mezzanine and G train mezzanine	1	40	90%	2254	0	704	0	1,050	0.74	C

Table 4C-15. Adopted Toll Structure Court Square-23rd Street Station (E, M, G, and No. 7 lines) – Fare Array Area Analysis (AM Peak Hour)

FARE ARRAY ELEMENT	QUANTITY	CAPACITY		PEAK HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR (OUT)	V/C RATIO	LOS
		In to Station	Out from Station	In to Station	Out from Station	In to Station	Out from Station				
21st Street and 44th Drive - northeast corner (N307)											
Two-Way Turnstiles	4	1,680	2,580	777	308	243	96	0.90	0.80	0.21	A
21st Street and 44th Drive – southeast corner (N307A)											
High Exit Only Turnstile	2	0	1,110	0	209	0	65	1.00	0.80	0.07	A
23rd Street and 44th Road – northeast corner (N308)											
Two-Way Turnstiles	4	1,680	2,580	538	314	168	98	0.90	0.75	0.17	A
Jackson Avenue and Pearson Street – northeast corner (N400C)											
HEET	2	510	1,080	52	46	16	14	0.90	0.80	0.05	A
Jackson Avenue and Court Square – southwest corner (N400)											
Two-Way Turnstiles	3	1,260	1,935	240	540	75	169	0.90	0.80	0.19	A
Jackson Avenue and 45th Avenue – northeast corner (N400B)											
Two-Way Turnstiles	3	1,260	1,935	224	296	70	93	0.90	0.80	0.13	A
Citicorp Building/One Court Square (N400A)											
Two-Way Turnstiles	7	2,940	4,515	169	355	53	111	0.90	0.80	0.05	A
Jackson Avenue and 23rd Street – southeast corner (R508)											
Two-Way Turnstiles	6	2,520	3,870	382	262	119	82	0.90	0.80	0.08	A

Table 4C-16. Adopted Toll Structure: Court Square-23rd Street Station (E, M, G, and No. 7 lines) – Stair Analysis (PM Peak Hour)

SUBWAY STAIR	LOCATION	ACTUAL WIDTH (FT)	EFFECTIVE WIDTH (FT)	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR		V/C RATIO	LOS
				In to Station	Out from Station	In to Station	Out from Station		In to Station	Out from Station		
QBL M3/S3	Street stair at southeast corner of 21st Street and 44th Drive	5.00	4.00	183	372	57	116	90%	90%	80%	0.39	A
QBL M4/S4	Street stair at northeast corner of 21st Street and 44th Drive	5.00	4.00	444	167	139	52	90%	90%	80%	0.41	A
QBL O6/O7	Street stair at southeast corner of 23rd Street and 44th Drive	10.00	8.50	384	218	120	68	90%	90%	80%	0.19	A
XTN M1/S1	Street stair at northeast corner of Jackson Avenue and Pearson Street	5.00	4.00	53	40	17	13	90%	90%	80%	0.07	A
XTN M3/S3	Street stair at southwest corner of Jackson Avenue and Court Square	5.50	4.50	448	266	140	83	90%	90%	80%	0.43	A
XTN O1/O2	Street stair at northeast corner of Jackson Avenue and 45th Avenue	9.00	7.75	341	110	107	34	90%	90%	80%	0.15	A
O3/O4	Stair in Citicorp Building/One Court Square	9.00	7.75	96	278	30	87	90%	90%	80%	0.14	A
FLU M1/S1	Street stair at southeast corner of Jackson Avenue and 23rd Street	8.00	6.75	399	147	125	46	90%	90%	80%	0.22	A
FLU M2/S2	Street stair at northwest corner of 23rd Street and 45th Road	5.00	4.00	360	169	113	53	90%	90%	80%	0.36	A
QBL P1	Connecting stair between N308 paid zone and Queens-bound E/M platform	14.00	12.75	1321	1868	413	584	90%	80%	75%	0.75	C
QBL P2	Connecting stair between N308 paid zone and Manhattan-bound E/M platform	14.00	12.75	1734	647	542	202	90%	80%	75%	0.55	B
QBL P3	Connecting stair between N307 paid zone and Queens-bound E/M platform	11.00	9.75	216	449	68	140	90%	80%	75%	0.21	A
QBL P4	Connecting stair between N307 paid zone and Manhattan-bound E/M platform	11.00	9.75	417	124	130	39	90%	80%	75%	0.16	A
FLU P1/P3	Connecting stair between R508 paid zone and Queens-bound 7 platform	8.00	6.75	1864	1155	583	361	90%	80%	75%	1.33	D
FLU P2/P4	Connecting stair between R508 paid zone and Manhattan-bound 7 platform	7.50	6.25	839	896	262	280	90%	80%	75%	0.83	C
O3/O4/O5	Connecting stair between 7 train mezzanine and G train mezzanine	7.00	6.00	115	455	36	142	90%	80%	80%	0.27	A
XTN P1	Connecting stair between N400C paid zone and G train platform	8.75	7.50	2430	199	759	62	90%	80%	75%	1.02	D
XTN P2	Connecting stair between N400 paid zone and G train platform	9.25	8.00	1194	677	373	212	90%	80%	75%	0.69	B
XTN P3	Connecting stair between N400 paid zone and G train platform	9.25	8.00	1105	1129	345	353	90%	80%	75%	0.84	C
XTN P5	Connecting stair between N400B paid zone and G train platform	7.00	6.00	17	356	5	111	100%	80%	75%	0.17	A
XTN P6	Connecting stair between N400B paid zone and G train platform	9.25	8.00	97	558	30	174	90%	80%	75%	0.25	A
XTN P7	Connecting stair between N400C paid zone and G train platform	9.25	8.00	270	595	84	186	90%	80%	75%	0.33	A
QBL M1	Connecting stair between E/M platforms and N308 paid zone	13.00	11.75	1734	647	542	202	90%	80%	80%	0.59	B

Table 4C-17. Adopted Toll Structure: Court Square-23rd Street Station (E, M, G, and No. 7 lines) – Escalator Analysis (PM Peak Hour)

SUBWAY STAIR	LOCATION	QUANTITY	TREAD WIDTH (IN)	SURGE FACTOR	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		PEAK 15-MINUTE CAPACITY (WITHOUT SURGING FACTOR)	V/C RATIO	LOS
					In to Station	Out from Station	In to Station	Out from Station			
E265	Exiting Escalator below Citicorp Building/One Court Square	1	32	90%	240	0	75	0	750	0.11	A
E266	Exiting Escalator below Citicorp Building/One Court Square	1	32	90%	0	207	0	65	750	0.10	A
E461X	Connecting escalator between 7 train mezzanine and G train mezzanine	1	40	90%	0	1816	0	568	1,050	0.60	B
E462X	Connecting escalator between 7 train mezzanine and G train mezzanine	1	40	90%	1831	0	572	0	1,050	0.61	B

Table 4C-18. Adopted Toll Structure: Court Square-23rd Street Station (E, M, G, and No. 7 lines) – Fare Array Area Analysis (PM Peak Hour)

FARE ARRAY ELEMENT	QUANTITY	CAPACITY		PEAK HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR (OUT)	V/C RATIO	LOS
		In to Station	Out from Station	In to Station	Out from Station	In to Station	Out from Station				
21st Street and 44th Drive - northeast corner (N307)											
Two-Way Turnstiles	4	1,680	2,580	627	175	196	55	0.90	0.80	0.16	A
21st Street and 44th Drive – southeast corner (N307A)											
High Exit Only Turnstile	2	0	1,110	0	391	0	122	1.00	0.80	0.14	A
23rd Street and 44th Road – northeast corner (N308)											
Two-Way Turnstiles	4	1,680	2,580	384	218	120	68	0.90	0.75	0.12	A
Jackson Avenue and Pearson Street – northeast corner (N400C)											
HEET	2	510	1,080	53	40	17	13	0.90	0.80	0.05	A
Jackson Avenue and Court Square – southwest corner (N400)											
Two-Way Turnstiles	3	1,260	1,935	448	286	140	89	0.90	0.80	0.19	A
Jackson Avenue and 45th Avenue – northeast corner (N400B)											
Two-Way Turnstiles	3	1,260	1,935	341	110	107	34	0.90	0.80	0.12	A
Citicorp Building/One Court Square (N400A)											
Two-Way Turnstiles	7	2,940	4,515	336	486	105	152	0.90	0.80	0.09	A
Jackson Avenue and 23rd Street – southeast corner (R508)											
Two-Way Turnstiles	6	2,520	3,870	759	316	237	99	0.90	0.80	0.14	A

Table 4C-19. Final EA (Scenario E): Main Street- Flushing Station (No. 7 line) – Stair Analysis (AM Peak Hour)

SUBWAY STAIR	LOCATION	ACTUAL WIDTH (FT)	EFFECTIVE WIDTH (FT)	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR		V/C RATIO	LOS
				In to Station	Out from Station	In to Station	Out from Station		In to Station	Out from Station		
S6/M6	Street stair at northwest corner of Roosevelt Avenue and Main Street	6.00	5.00	2225	692	695	216	90%	90%	80%	1.54	E
S4/M4	Street stair at northeast corner of Roosevelt Avenue and Main Street	5.00	4.00	1,241	442	388	138	90%	100%	80%	1.04	D
S7/M7	Street stair at southwest corner of Roosevelt Avenue and Main Street	5.00	4.00	817	805	255	252	90%	80%	80%	1.17	D
S3	Street stair at southeast corner of Roosevelt Avenue and Main Street	5.00	4.00	143	88	45	28	90%	100%	80%	0.15	A
S5	Street stair at southeast corner of Roosevelt Avenue and Main Street	4.80	3.80	1,977	355	618	111	90%	80%	80%	1.78	F
M3/M5	Street stair at southeast corner of Roosevelt Avenue and Main Street	11.50	10.25	2,119	442	662	138	90%	90%	80%	0.66	B
M11	Street stair on south side of Roosevelt Avenue between Main Street and Union Street	10.00	8.75	562	8	176	3	100%	80%	75%	0.17	A
P11	Connecting stair between platform and R533 paid zone west	4.25	3.25	2,423	442	757	138	90%	80%	75%	2.58	F
P12	Connecting stair between platform and R533 paid zone west	4.25	3.25	532	264	166	83	90%	80%	75%	0.73	C
P15	Connecting stair between platform and R533 paid zone west	4.25	3.25	1,113	294	348	92	90%	80%	75%	1.27	D
P16	Connecting stair between platform and R533 paid zone west	4.25	3.25	82	191	26	60	90%	80%	75%	0.26	A
P3	Connecting stair between platform and R533 paid zone east	4.25	3.25	146	315	46	98	90%	80%	75%	0.43	A
P4	Connecting stair between platform and R533 paid zone east	4.25	3.25	24	194	8	61	90%	80%	75%	0.21	A
P5/P7	Connecting stair between platform and R533 paid zone east	4.25	3.25	1,902	424	594	133	90%	80%	75%	2.10	F
P6/P8	Connecting stair between platform and R533 paid zone east	4.25	3.25	207	256	65	80	90%	80%	75%	0.43	A

Table 4C-20. Final EA (Scenario E): Main Street- Flushing Station (No. 7 line) – Escalator Analysis (AM Peak Hour)

SUBWAY STAIR	LOCATION	QUANTITY	TREAD WIDTH (IN)	SURGE FACTOR	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		PEAK 15-MINUTE CAPACITY (WITHOUT SURGING FACTOR)	V/C RATIO	LOS
					In to Station	Out from Station	In to Station	Out from Station			
E455	Street escalator at north side of Roosevelt Avenue between Main Street and Union Street	1	40	75%	0	899	0	281	1,050	0.36	A
E456	Street escalator at north side of Roosevelt Avenue between Main Street and Union Street	1	40	75%	3,040	0	950	0	1,050	1.21	D+
E457	Street escalator at south side of Roosevelt Avenue between Main Street and Union Street	1	40	75%	0	393	0	123	1,050	0.16	A
NOTE: + denotes a significant adverse effect											

Table 4C-21. Final EA (Scenario E): Main Street- Flushing Station (No. 7 line) – Fare Array Area Analysis (AM Peak Hour)

FARE ARRAY ELEMENT	QUANTITY	CAPACITY		PEAK HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR (OUT)	V/C RATIO	LOS
		In to Station	Out from Station	In to Station	Out from Station	In to Station	Out from Station				
Main Street and Roosevelt Avenue (R533-West)											
Two-Way Turnstiles	8	3,360	5,160	4,149	1,191	1,297	372	90%	80%	0.53	B
Main Street and Roosevelt Avenue (R533-East)											
Two-Way Turnstiles	8	3,360	5,160	2,254	1,189	704	372	90%	80%	0.33	A
Roosevelt Avenue between Main Street and Union Street (R534)											
Two-Way Turnstiles	9	3,780	5,805	3,603	1,301	1,126	407	90%	75%	0.43	A

Table 4C-22. Final EA (Scenario E): Main Street- Flushing Station (No. 7 line) – Stair Analysis (PM Peak Hour)

SUBWAY STAIR	LOCATION	ACTUAL WIDTH (FT)	EFFECTIVE WIDTH (FT)	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR		V/C RATIO	LOS
				In to Station	Out from Station	In to Station	Out from Station		In to Station	Out from Station		
S6/M6	Street stair at northwest corner of Roosevelt Avenue and Main Street	6.00	5.00	820	1,507	256	471	90%	90%	80%	1.29	D
S4/M4	Street stair at northeast corner of Roosevelt Avenue and Main Street	5.00	4.00	615	891	192	278	90%	100%	80%	1.00	C
S7/M7	Street stair at southwest corner of Roosevelt Avenue and Main Street	5.00	4.00	497	1,495	155	467	90%	80%	80%	1.44	E
S3	Street stair at southeast corner of Roosevelt Avenue and Main Street	5.00	4.00	249	613	78	192	90%	100%	80%	0.59	B
S5	Street stair at southeast corner of Roosevelt Avenue and Main Street	4.80	3.80	592	1,273	185	398	90%	80%	80%	1.42	E
M3/M5	Street stair at southeast corner of Roosevelt Avenue and Main Street	11.50	10.25	841	1,886	263	589	90%	90%	80%	0.74	C
M11	Street stair on south side of Roosevelt Avenue between Main Street and Union Street	10.00	8.75	73	69	23	22	90%	80%	75%	0.05	A
P11	Connecting stair between platform and R533 paid zone west	4.25	3.25	476	619	149	193	90%	80%	75%	1.01	D
P12	Connecting stair between platform and R533 paid zone west	4.25	3.25	1,085	984	339	308	90%	80%	75%	1.90	F
P15	Connecting stair between platform and R533 paid zone west	4.25	3.25	39	680	12	213	100%	80%	75%	0.61	B
P16	Connecting stair between platform and R533 paid zone west	4.25	3.25	124	867	39	271	90%	80%	75%	0.93	C
P3	Connecting stair between platform and R533 paid zone east	4.25	3.25	35	525	11	164	90%	80%	75%	0.53	B
P4	Connecting stair between platform and R533 paid zone east	4.25	3.25	25	809	8	253	100%	80%	75%	0.71	C
P5/P7	Connecting stair between platform and R533 paid zone east	4.25	3.25	348	538	109	168	90%	80%	75%	0.82	C
P6/P8	Connecting stair between platform and R533 paid zone east	4.25	3.25	633	756	198	236	90%	80%	75%	1.28	D

Table 4C-23. Final EA (Scenario E): Main Street- Flushing Station (No. 7 line) – Escalator Analysis (PM Peak Hour)

SUBWAY STAIR	LOCATION	QUANTITY	TREAD WIDTH (IN)	SURGE FACTOR	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		PEAK 15-MINUTE CAPACITY (WITHOUT SURGING FACTOR)	V/C RATIO	LOS
					In to Station	Out from Station	In to Station	Out from Station			
E455	Street escalator at north side of Roosevelt Avenue between Main Street and Union Street	1	40	75%	0	1,362	0	426	1,050	0.54	B
E456	Street escalator at north side of Roosevelt Avenue between Main Street and Union Street	1	40	75%	706	0	221	0	1,050	0.28	A
E457	Street escalator at south side of Roosevelt Avenue between Main Street and Union Street	1	40	75%	0	1,562	0	488	1,050	0.62	B

Table 4C-24. Final EA (Scenario E): Main Street- Flushing Station (No. 7 line) – Fare Array Area Analysis (PM Peak Hour)

FARE ARRAY ELEMENT	QUANTITY	CAPACITY		PEAK HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR (OUT)	V/C RATIO	LOS
		In to Station	Out from Station	In to Station	Out from Station	In to Station	Out from Station				
Main Street and Roosevelt Avenue (R533-West)											
Two-Way Turnstiles	8	3,360	5,160	1,724	3,150	539	984	90%	80%	0.44	A
Main Street and Roosevelt Avenue (R533-East)											
Two-Way Turnstiles	8	3,360	5,160	1,048	2,629	328	822	90%	80%	0.33	A
Roosevelt Avenue between Main Street and Union Street (R534)											
Two-Way Turnstiles	9	3,780	5,805	778	2,993	243	935	90%	75%	0.31	A

Table 4C-25. Adopted Toll Structure: Main Street- Flushing Station (No. 7 line) – Stair Analysis (AM Peak Hour)

SUBWAY STAIR	LOCATION	ACTUAL WIDTH (FT)	EFFECTIVE WIDTH (FT)	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR		V/C RATIO	LOS
				In to Station	Out from Station	In to Station	Out from Station		In to Station	Out from Station		
S6/M6	Street stair at northwest corner of Roosevelt Avenue and Main Street	6.00	5.00	2228	694	696	217	90%	90%	80%	1.55	E
S4/M4	Street stair at northeast corner of Roosevelt Avenue and Main Street	5.00	4.00	1,243	444	388	139	90%	100%	80%	1.04	D
S7/M7	Street stair at southwest corner of Roosevelt Avenue and Main Street	5.00	4.00	818	807	256	252	90%	80%	80%	1.18	D
S3	Street stair at southeast corner of Roosevelt Avenue and Main Street	5.00	4.00	143	88	45	28	90%	100%	80%	0.15	A
S5	Street stair at southeast corner of Roosevelt Avenue and Main Street	4.80	3.80	1,980	355	619	111	90%	80%	80%	1.78	F
M3/M5	Street stair at southeast corner of Roosevelt Avenue and Main Street	11.50	10.25	2,122	444	663	139	90%	90%	80%	0.66	B
M11	Street stair on south side of Roosevelt Avenue between Main Street and Union Street	10.00	8.75	563	8	176	3	100%	80%	75%	0.17	A
P11	Connecting stair between platform and R533 paid zone west	4.25	3.25	2,426	444	758	139	90%	80%	75%	2.58	F
P12	Connecting stair between platform and R533 paid zone west	4.25	3.25	533	264	167	83	90%	80%	75%	0.73	C
P15	Connecting stair between platform and R533 paid zone west	4.25	3.25	1,114	295	348	92	90%	80%	75%	1.27	D
P16	Connecting stair between platform and R533 paid zone west	4.25	3.25	82	192	26	60	90%	80%	75%	0.26	A
P3	Connecting stair between platform and R533 paid zone east	4.25	3.25	147	316	46	99	90%	80%	75%	0.43	A
P4	Connecting stair between platform and R533 paid zone east	4.25	3.25	24	195	8	61	90%	80%	75%	0.21	A
P5/P7	Connecting stair between platform and R533 paid zone east	4.25	3.25	1,906	425	596	133	90%	80%	75%	2.10	F
P6/P8	Connecting stair between platform and R533 paid zone east	4.25	3.25	208	257	65	80	90%	80%	75%	0.43	A

Table 4C-26. Adopted Toll Structure: Main Street- Flushing Station (No. 7 line) – Escalator Analysis (AM Peak Hour)

SUBWAY STAIR	LOCATION	QUANTITY	TREAD WIDTH (IN)	SURGE FACTOR	PEAK-HOUR VOLUMES In to Station	PEAK-HOUR VOLUMES Out from Station	PEAK 15-MINUTE VOLUMES In to Station	PEAK 15-MINUTE VOLUMES Out from Station	PEAK 15-MINUTE CAPACITY (WITHOUT SURGING FACTOR)	V/C RATIO	LOS
E455	Street escalator at north side of Roosevelt Avenue between Main Street and Union Street	1	40	75%	0	901	0	282	1,050	0.36	A
E456	Street escalator at north side of Roosevelt Avenue between Main Street and Union Street	1	40	75%	3045	0	952	0	1,050	1.21	D+
E457	Street escalator at south side of Roosevelt Avenue between Main Street and Union Street	1	40	75%	0	394	0	123	1,050	0.16	A

NOTE: + denotes a significant adverse effect

Table 4C-27. Adopted Toll Structure: Main Street- Flushing Station (No. 7 line) – Fare Array Area Analysis (AM Peak Hour)

FARE ARRAY ELEMENT	QUANTITY	CAPACITY In to Station	CAPACITY Out from Station	PEAK HOUR VOLUMES In to Station	PEAK HOUR VOLUMES Out from Station	PEAK 15-MINUTE VOLUMES In to Station	PEAK 15-MINUTE VOLUMES Out from Station	FRICTION FACTOR	SURGE FACTOR (OUT)	V/C RATIO	LOS
Main Street and Roosevelt Avenue (R533-West)											
Two-Way Turnstiles	8	3,360	5,160	4,155	1,194	1,298	373	0.90	0.80	0.53	B
Main Street and Roosevelt Avenue (R533-East)											
Two-Way Turnstiles	8	3,360	5,160	2,257	1,192	705	373	0.90	0.80	0.33	A
Roosevelt Avenue between Main Street and Union Street (R534)											
Two-Way Turnstiles	9	3,780	5,805	3,608	1,304	1,128	408	0.90	0.75	0.44	A

Table 4C-28. Adopted Toll Structure: Main Street- Flushing Station (No. 7 line) – Stair Analysis (PM Peak Hour)

SUBWAY STAIR	LOCATION	ACTUAL WIDTH (FT)	EFFECTIVE WIDTH (FT)	PEAK-HOUR VOLUMES In to Station	PEAK-HOUR VOLUMES Out from Station	PEAK 15-MINUTE VOLUMES In to Station	PEAK 15-MINUTE VOLUMES Out from Station	FRICTION FACTOR	SURGE FACTOR In to Station	SURGE FACTOR Out from Station	V/C RATIO	LOS
S6/M6	Street stair at northwest corner of Roosevelt Avenue and Main Street	6.00	5.00	823	1,510	257	472	90%	90%	80%	1.30	D
S4/M4	Street stair at northeast corner of Roosevelt Avenue and Main Street	5.00	4.00	616	893	193	279	90%	100%	80%	1.00	D
S7/M7	Street stair at southwest corner of Roosevelt Avenue and Main Street	5.00	4.00	498	1,498	156	468	90%	80%	80%	1.44	E
S3	Street stair at southeast corner of Roosevelt Avenue and Main Street	5.00	4.00	250	614	78	192	90%	100%	80%	0.59	B
S5	Street stair at southeast corner of Roosevelt Avenue and Main Street	4.80	3.80	594	1,275	186	398	90%	80%	80%	1.42	E
M3/M5	Street stair at southeast corner of Roosevelt Avenue and Main Street	11.50	10.25	843	1,889	263	590	90%	90%	80%	0.74	C
M11	Street stair on south side of Roosevelt Avenue between Main Street and Union Street	10.00	8.75	73	69	23	22	90%	80%	75%	0.05	A
P11	Connecting stair between platform and R533 paid zone west	4.25	3.25	478	620	149	194	90%	80%	75%	1.01	D
P12	Connecting stair between platform and R533 paid zone west	4.25	3.25	1,088	986	340	308	90%	80%	75%	1.90	F
P15	Connecting stair between platform and R533 paid zone west	4.25	3.25	39	682	12	213	100%	80%	75%	0.61	B
P16	Connecting stair between platform and R533 paid zone west	4.25	3.25	124	868	39	271	90%	80%	75%	0.93	C
P3	Connecting stair between platform and R533 paid zone east	4.25	3.25	35	526	11	164	90%	80%	75%	0.53	B
P4	Connecting stair between platform and R533 paid zone east	4.25	3.25	26	811	8	253	100%	80%	75%	0.71	C
P5/P7	Connecting stair between platform and R533 paid zone east	4.25	3.25	349	539	109	168	90%	80%	75%	0.82	C
P6/P8	Connecting stair between platform and R533 paid zone east	4.25	3.25	635	758	198	237	90%	80%	75%	1.28	D

Table 4C-29. Adopted Toll Structure: Main Street- Flushing Station (No. 7 line) – Escalator Analysis (PM Peak Hour)

SUBWAY STAIR	LOCATION	QUANTITY	TREAD WIDTH (IN)	SURGE FACTOR	PEAK-HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		PEAK 15-MINUTE CAPACITY (WITHOUT SURGING FACTOR)	V/C RATIO	LOS
					In to Station	Out from Station	In to Station	Out from Station			
E455	Street escalator at north side of Roosevelt Avenue between Main Street and Union Street	1	40	75%	0	1364	0	426	1,050	0.54	B
E456	Street escalator at north side of Roosevelt Avenue between Main Street and Union Street	1	40	75%	708	0	221	0	1,050	0.28	A
E457	Street escalator at south side of Roosevelt Avenue between Main Street and Union Street	1	40	75%	0	1565	0	489	1,050	0.62	B

Table 4C-30. Adopted Toll Structure: Main Street- Flushing Station (No. 7 line) – Fare Array Area Analysis (PM Peak Hour)

FARE ARRAY ELEMENT	QUANTITY	CAPACITY		PEAK HOUR VOLUMES		PEAK 15-MINUTE VOLUMES		FRICTION FACTOR	SURGE FACTOR (OUT)	V/C RATIO	LOS
		In to Station	Out from Station	In to Station	Out from Station	In to Station	Out from Station				
Main Street and Roosevelt Avenue (R533-West)											
Two-Way Turnstiles	8	3,360	5,160	1,729	3,156	540	986	0.90	0.80	0.44	A
Main Street and Roosevelt Avenue (R533-East)											
Two-Way Turnstiles	8	3,360	5,160	1,051	2,633	328	823	0.90	0.80	0.33	A
Roosevelt Avenue between Main Street and Union Street (R534)											
Two-Way Turnstiles	9	3,780	5,805	781	2,998	244	937	0.90	0.75	0.31	A

Table 4C-31. Final EA (Scenario E): Level of Service Summary with and without Project Improvements

The two (2) vertical circulation elements in this table are modeled to meet CEQR thresholds for significant adverse effects under the most conservative tolling scenario.

ELEMENT	LOCATION	STAIR EFFECTIVE WIDTH / ESCALATOR TREAD WIDTH	PROJECT IMPROVEMENT	AM PEAK HOUR			PM PEAK HOUR		
				No Action v/c (LOS)	With Action v/c (LOS)	With Action With Improvements v/c (LOS)	No Action v/c (LOS)	With Action v/c (LOS)	With Action With Improvements v/c (LOS)
Court Square-23rd Street Station (E, M, G, and No. 7 lines)									
FLU P2/P4	Connecting stair between R508 paid zone and Manhattan-bound No. 7 line platform	6.25 feet	Add new 5-foot-wide platform stair on north end of Manhattan-bound No. 7 line platform	1.84 (F)	1.90 (F)	1.56 (E)	No Adverse Effects		
NEW FLU plat stair	New connecting stair between new fare control area and Manhattan-bound No. 7 line platform	4 feet	New platform stair on north end of Manhattan-bound No. 7 line platform	N/A	N/A	0.53 (B)	N/A	N/A	0.44 (A)
Main Street Flushing Station (No. 7 line)									
E456	Street escalator at north side of Roosevelt Avenue between Main Street and Union Street	40 inches	Raise escalator speed to 120 fpm	1.18 (D)	1.21 (D)	1.08 (D)	No Adverse Effects		

Table 4C-32. Adopted Toll Structure: Level of Service Summary with and without Project Improvements

The two (2) vertical circulation elements in this table are modeled to meet CEQR thresholds for significant adverse effects.

ELEMENT	LOCATION	STAIR EFFECTIVE WIDTH / ESCALATOR TREAD WIDTH	PROJECT IMPROVEMENT	AM PEAK HOUR No Action v/c (LOS)	AM PEAK HOUR With Action v/c (LOS)	AM PEAK HOUR With Action With Improvements v/c (LOS)	PM PEAK HOUR No Action v/c (LOS)	PM PEAK HOUR With Action v/c (LOS)	PM PEAK HOUR With Action With Improvements v/c (LOS)
Court Square-23rd Street Station (E, M, G, and No. 7 lines)									
FLU P2/P4	Connecting stair between R508 paid zone and Manhattan-bound No. 7 line platform	6.25 feet	Add new 5-foot-wide platform stair on north end of Manhattan-bound No. 7 line platform	1.84 (F)	1.90 (F)	1.56 (E)	No Adverse Effects		
NEW FLU plat stair	New connecting stair between new fare control area and Manhattan-bound No. 7 line platform	4 feet	New platform stair on north end of Manhattan-bound No. 7 line platform	N/A	N/A	0.53 (B)	N/A	N/A	0.43 (A)
Main Street Flushing Station (No. 7 line)									
E456	Street escalator at north side of Roosevelt Avenue between Main Street and Union Street	40 inches	Raise escalator speed to 120 fpm	1.18 (D)	1.21 (D)	1.08 (D)	No Adverse Effects		

CENTRAL BUSINESS DISTRICT (CBD) TOLLING PROGRAM

Appendix 10, Air Quality

2024

PROJECT-LEVEL HOT-SPOT SCREENING

Table 1. Upper East Side Study Area – No-Action Alternative vs. Adopted Toll Structure Carbon Monoxide Screening

Intersection #	Intersection Name	LN LOS		LN Volume		LN Screen	
		NB	BD	NB	BD	LOS	10% Volume
1	E 60th Street & Queensboro Bridge Exit	0	0	437	371	Pass	NA
2	E 60th Street & 3rd Ave	C	C	1676	1251	Pass	NA
3	E 60th Street & York Ave	C	C	1402	1106	Pass	NA
4	E 59th Street & 2nd Ave	C	B	3476	1369	Pass	NA
5	E 60th Street & 2nd Ave	C	B	2939	1237	Pass	NA
6	E 60th Street & 1st Ave	B	B	1727	1485	Pass	NA
7	E 60th Street & Lexington Ave	C	C	1640	1079	Pass	NA
8a	E 60th Street & Park Ave NB	C	C	974	821	Pass	NA
8b	E 60th Street & Park Ave SB	B	B	1368	1191	Pass	NA
9	E 60th Street & Madison Ave	B	B	1374	1169	Pass	NA
10	E 62nd Street & Queensboro Bridge Exit	B	B	1880	2034	Pass	NA
11	E 60th Street & 5th Ave	C	B	1508	1100	Pass	NA
12	E 63rd Street & York Ave	C	C	2021	1646	Pass	NA
13	E 53rd Street & FDR Drive	0	0	523	446	Pass	NA
14	E 61st Street & 5th Ave	C	B	1160	793	Pass	NA
15	E 65th Street & 5th Ave	C	B	1680	1581	Pass	NA
16	E 66th Street & 5th Avenue	C	C	1529	1418	Pass	NA
17	E 79th Street & 5th Ave	C	C	1653	1540	Pass	NA
18	E 71st Street & York Ave	C	C	963	743	Pass	NA

Table 2. Upper East Side Study Area – No-Action Alternative vs. Adopted Toll Structure Particulate Matter Screening

Intersection #	Intersection Name	LN LOS		LN Increment			LN HDDV	LN Screen	
		NB	BD	MT	Bus	HT	Total	LOS	HDDT
1	E 60th Street & Queensboro Bridge Exit	0	0	-2	-1	0	-3	Pass	NA
2	E 60th Street & 3rd Ave	C	C	-15	-4	0	-19	Pass	NA
3	E 60th Street & York Ave	C	C	0	-4	0	-4	Pass	NA
4	E 59th Street & 2nd Ave	C	B	-55	-27	-14	-96	Pass	NA
5	E 60th Street & 2nd Ave	C	B	-46	-14	-13	-73	Pass	NA
6	E 60th Street & 1st Ave	B	B	-5	-2	0	-7	Pass	NA
7	E 60th Street & Lexington Ave	C	C	-8	-7	-1	-16	Pass	NA
8a	E 60th Street & Park Ave NB	C	C	-6	-7	0	-13	Pass	NA
8b	E 60th Street & Park Ave SB	B	B	-1	-1	0	-2	Pass	NA
9	E 60th Street & Madison Ave	B	B	-2	-4	0	-6	Pass	NA
10	E 62nd Street & Queensboro Bridge Exit	B	B	-1	0	0	-1	Pass	NA
11	E 60th Street & 5th Ave	C	B	-3	-8	-1	-12	Pass	NA
12	E 63rd Street & York Ave	C	C	-1	-1	0	-2	Pass	NA
13	E 53rd Street & FDR Drive	0	0	0	0	0	0	Pass	NA
14	E 61st Street & 5th Ave	C	B	-2	-7	-1	-10	Pass	NA
15	E 65th Street & 5th Ave	C	B	0	-3	0	-3	Pass	NA
16	E 66th Street & 5th Avenue	C	C	0	-2	0	-2	Pass	NA
17	E 79th Street & 5th Ave	C	C	0	-3	0	-3	Pass	NA
18	E 71st Street & York Ave	C	C	-2	-4	0	-6	Pass	NA

Table 3. Long Island City Study Area - No-Action Alternative vs. Adopted Toll Structure Carbon Monoxide Screening

Intersection #	Intersection Name	AM LOS		AM Volume		AM Screen	
		NB	BD	NB	BD	LOS	10% Volume
1a	Pulaski Bridge / 11th Street & Jackson Avenue	E	E	2473	2446	Fail	Pass
1b	11th Street & 48TH Avenue	C	C	1305	1284	Pass	NA
2	50th Avenue @ Vernon Blvd	B	B	544	556	Pass	NA
3	Green Street & McGuiness Blvd	C	C	2487	2438	Pass	NA
4	McGuinness Blvd & Freeman Street	0	0	2723	2642	Pass	NA
5	21st Street & 49th Avenue	D	D	948	933	Fail	Pass
7	11th Street & Borden Avenue	0	0	1443	1383	Pass	NA
8a	Van Dam Street & QMT Expy	D	D	2344	2210	Fail	Pass
8b	Van Dam Street & Borden Avenue	E	E	1376	1293	Fail	Pass
9	Jackson Ave / Northern Blvd & Queens Plaza	C	C	2556	2328	Pass	NA
11a	Thomson Avenue & Dutch Kills Street	0		1681	1669	Pass	NA
11b	Thomson Avenue & Dutch Kills Street	0	0	2523	2390	Pass	NA
12	21st Street & Queens Plaza N	D	D	1998	1925	Fail	Pass

Table 4. Long Island City Study Area - No-Action Alternative vs. Adopted Toll Structure Particulate Matter Screening

Intersection #	Intersection Name	AM LOS		AM Increment			AM HDDV	AM Screen	
		NB	BD	MT	Bus	HT	Total	LOS	HDDT
1a	Pulaski Bridge / 11th Street & Jackson Avenue	E	E	0	0	0	0	Fail	Pass
1b	11th Street & 48th Avenue	C	C	0	0	0	0	Pass	NA
2	50th Avenue @ Vernon Blvd	B	B	1	-1	0	0	Pass	NA
3	Green Street & McGuiness Blvd	C	C	-2	-1	0	-3	Pass	NA
4	McGuinness Blvd & Freeman Street	0	0	-5	-1	0	-6	Pass	NA
5	21st Street & 49th Avenue	D	D	0	0	0	0	Fail	Pass
7	11th Street & Borden Avenue	0	0	0	0	0	0	Pass	NA
8a	Van Dam Street & QMT Expy	D	D	-9	-2	-1	-12	Fail	Pass
8b	Van Dam Street & Borden Avenue	E	E	-8	-1	0	-9	Fail	Pass
9	Jackson Ave / Northern Blvd & Queens Plaza	C	C	0	0	0	0	Pass	NA
11a	Thomson Avenue & Dutch Kills Street	0		-1	-1	0	-2	Pass	NA
11b	Thomson Avenue & Dutch Kills Street	0	0	-1	-1	0	-2	Pass	NA
12	21st Street & Queens Plaza N	D	D	-1	-1	0	-2	Fail	Pass

Table 5. Lower Manhattan Study Area – No-Action Alternative vs. Adopted Toll Structure Carbon Monoxide Screening

Intersection #	Intersection Name	AM LOS		AM Volume		AM Screen		MD LOS		MD Volume		MD Screen		PM LOS		PM Volume		PM Screen	
		NB	BD	NB	BD	LOS	10% Volume	NB	BD	NB	BD	LOS	10% Volume	NB	BD	NB	BD	LOS	10% Volume
1	Trinity Place & Edgar Street	B	B	117	77	Pass	NA	C	C	364	329	Pass	NA	C	C	144	136	Pass	NA
2	Trinity Place & Rector Street	C	C	251	211	Pass	NA	C	D	508	478	Fail	Pass	C	C	264	242	Pass	NA
3a	HCT Entrance/Exit & West Street	C	C	4216	4165	Pass	NA	B	B	4055	3953	Pass	NA	A	A	3511	3290	Pass	NA
3b	HCT Exit & West Street & West Thams Street	C	C	3339	3268	Pass	NA	C	C	3265	3158	Pass	NA	C	C	2373	2245	Pass	NA
4	Chambers Street & Centre Street	C	C	1588	1486	Pass	NA	C	C	1409	1265	Pass	NA	E	D	1873	1588	Fail	Pass
5a	Canal Street & Hudson Street/Holland Tunnel On-Ramp	C	C	2586	2319	Pass	NA	D	C	1988	1600	Pass	NA	C	C	1533	1399	Pass	NA
5b	Canal Street & Holland Tunnel On-Ramp	E	E	2013	1890	Fail	Pass	C	B	1319	1165	Pass	NA	F	F	1889	1832	Fail	Pass
7a	Canal Street S & West Street	D	D	5849	5716	Fail	Pass	C	C	4638	4425	Pass	NA	D	D	5146	4852	Fail	Pass
9	West Street & Albany Street	C	C	4436	4395	Pass	NA	C	C	4149	4035	Pass	NA	C	C	4049	3852	Pass	NA
10	West Street & Vesey Street	C	C	4668	4598	Pass	NA	C	C	4562	4422	Pass	NA	C	C	4373	4171	Pass	NA
11	West Street & Chambers Street	D	C	5053	4930	Pass	NA	C	C	4845	4628	Pass	NA	D	C	4840	4553	Pass	NA
14	Canal Street/Manhattan Bridge & Bowery	D	C	8718	8119	Pass	NA	C	B	2774	2065	Pass	NA	C	B	3276	2331	Pass	NA
15	Manhattan Bridge & Bowery	C	B	1421	1116	Pass	NA	B	B	1162	801	Pass	NA	B	B	1395	851	Pass	NA
18	6th Avenue & Watts Street	B	B	1884	1716	Pass	NA	B	B	1784	1563	Pass	NA	C	C	997	810	Pass	NA
19	Canal Street & 6th Avenue/Laight Street	E	D	3634	3394	Fail	Pass	C	C	2555	2266	Pass	NA	C	C	2932	2584	Pass	NA

Table 6. Lower Manhattan Study Area – No-Action Alternative vs. Adopted Toll Structure Particulate Matter Screening

Intersection #	Intersection Name	Approach	AM LOS		AM Increment			AM HDDV	AM Screen		MD LOS		MD Increment			MD HDDV	MD Screen		PM LOS		PM Increment			PM HDDV	PM Screen	
			NB	BD	MT	Bus	HT	Total	LOS	HDDT	NB	BD	MT	Bus	HT	Total	LOS	HDDT	NB	BD	MT	Bus	HT	Total	LOS	HDDT
1	Trinity Place & Edgar Street	Intersection	B	B	-2	-21	0	-23	Pass	NA	C	C	-2	-8	0	-10	Pass	NA	C	C	0	-4	0	-4	Pass	NA
2	Trinity Place & Rector Street	Intersection	C	C	-3	-18	0	-21	Pass	NA	C	D	-2	-5	0	-7	Fail	Pass	C	C	-2	-4	0	-6	Pass	NA
3a	HCT Entrance/Exit & West Street	Intersection	C	C	-2	3	0	1	Pass	NA	B	B	-5	-1	0	-6	Pass	NA	A	A	-3	-13	0	-16	Pass	NA
3b	HCT Exit & West Street & West Thames Street	Intersection	C	C	-2	-2	0	-4	Pass	NA	C	C	-4	-3	0	-7	Pass	NA	C	C	-2	-4	0	-6	Pass	NA
4	Chambers Street & Centre Street	Intersection	C	C	-17	-34	0	-51	Pass	NA	C	C	-3	-32	0	-35	Pass	NA	E	D	-46	-78	0	-124	Fail	Pass
5a	Canal Street & Hudson Street/Holland Tunnel On-Ramp	Intersection	C	C	-18	-13	-1	-32	Pass	NA	D	C	-31	-4	-5	-40	Pass	NA	C	C	-4	-1	0	-5	Pass	NA
5b	Canal Street & Holland Tunnel On-Ramp	Intersection	E	E	-14	-10	-3	-27	Fail	Pass	C	B	-20	-5	-7	-32	Pass	NA	F	F	-2	-1	0	-3	Fail	Pass
7a	Canal Street S & West Street	Intersection	D	D	-7	-6	0	-13	Fail	Pass	C	C	-8	-7	-1	-16	Pass	NA	D	D	-7	-7	0	-14	Fail	Pass
9	West Street & Albany Street	Intersection	C	C	-2	-1	0	-3	Pass	NA	C	C	6	-6	0	0	Pass	NA	C	C	-2	-6	0	-8	Pass	NA
10	West Street & Vesey Street	Intersection	C	C	-3	-3	0	-6	Pass	NA	C	C	-4	-4	0	-8	Pass	NA	C	C	-3	-6	0	-9	Pass	NA
11	West Street & Chambers Street	Intersection	D	C	-4	-4	0	-8	Pass	NA	C	C	-7	-5	0	-12	Pass	NA	D	C	-4	-9	0	-13	Pass	NA
14	Canal Street/Manhattan Bridge & Bowery	Intersection	D	C	-57	-19	-4	-80	Pass	NA	C	B	-84	-24	-4	-112	Pass	NA	C	B	-43	-29	0	-72	Pass	NA
15	Manhattan Bridge & Bowery	Intersection	C	B	0	0	0	0	Pass	NA	B	B	0	0	0	0	Pass	NA	B	B	0	0	0	0	Pass	NA
18	6th Avenue & Watts Street	Intersection	B	B	-8	-7	0	-15	Pass	NA	B	B	-8	-5	-1	-14	Pass	NA	C	C	-3	-9	0	-12	Pass	NA
19	Canal Street & 6th Avenue/Laight Street	Intersection	E	D	-24	-9	-1	-34	Fail	Pass	C	C	-32	-3	-2	-37	Pass	NA	C	C	-16	-9	-1	-26	Pass	NA

Table 7. Queens-Midtown Tunnel Study Area– No-Action Alternative vs. Adopted Toll Structure Carbon Monoxide Screening

Intersection #	Intersection Name	MD LOS		MD Volume		MD Screen		LN LOS		LN Volume		LN Screen	
		NB	BD	NB	BD	LOS	10%	NB	BD	NB	BD	LOS	10%
1	E 37th Street & 3rd Avenue	C	C	1521	1448	Pass	NA	C	C	1799	1716	Pass	NA
2	E 36th Street & 2nd Avenue	F	E	2640	2445	Fail	Pass	C	B	2581	2402	Pass	NA
3	E 34th Street & 3rd Avenue	D	C	2247	2046	Pass	NA	C	C	2410	2201	Pass	NA
4	E 35th Street & 3rd Avenue	B	B	1734	1578	Pass	NA	B	A	1878	1705	Pass	NA
5	E 34th Street & 2nd Avenue	C	C	2573	2480	Pass	NA	C	B	2769	2609	Pass	NA
6	E 35th Street & 2nd Avenue	B	B	1767	1729	Pass	NA	B	B	2042	1939	Pass	NA

Table 8. Queens-Midtown Tunnel Study Area – No-Action Alternative vs. Adopted Toll Structure Particulate Matter Screening

Intersection #	Intersection Name	MD LOS		MD Increment			MD HDDV	MD Screen		LN LOS		LN Increment			LN HDDV	LN Screen	
		NB	BD	MT	Bus	HT	Total	LOS	HDDT	NB	BD	MT	Bus	HT	Total	LOS	HDDT
1	E 37th Street & 3rd Avenue	C	C	-6	-2	0	-8	Pass	NA	C	C	-1	-1	0	-2	Pass	NA
2	E 36th Street & 2nd Avenue	F	E	-14	-4	0	-18	Fail	Pass	C	B	-3	-2	0	-5	Pass	NA
3	E 34th Street & 3rd Avenue	D	C	-13	-7	0	-20	Pass	NA	C	C	-3	-4	0	-7	Pass	NA
4	E 35th Street & 3rd Avenue	B	B	-8	-2	0	-10	Pass	NA	B	A	-1	-1	0	-2	Pass	NA
5	E 34th Street & 2nd Avenue	C	C	-6	-2	0	-8	Pass	NA	C	B	-1	-2	0	-3	Pass	NA
6	E 35th Street & 2nd Avenue	B	B	-3	-1	0	-4	Pass	NA	B	B	-1	-1	0	-2	Pass	NA

Table 9. Red Hook Study Area – No-Action Alternative vs. Adopted Toll Structure Carbon Monoxide Screening

Intersection #	Intersection Name	AM LOS		AM Volume		AM Screen		MD LOS		MD Volume		MD Screen		LN LOS		LN Volume		LN Screen	
		NB	BD	NB	BD	LOS	10% Volume	NB	BD	NB	BD	LOS	10% Volume	NB	BD	NB	BD	LOS	10% Volume
1	Hamilton Avenue, Clinton Street & West 9th Street	A	B	5490	5516	Pass	NA	B	B	5387	5329	Pass	NA	A	A	3035	2973	Pass	NA
2	Hamilton Avenue NB & West 9th Street	B	B	2324	2299	Pass	NA	B	B	2099	2042	Pass	NA	B	A	1110	1026	Pass	NA

Table 10. Red Hook Study Area – No-Action Alternative vs. Adopted Toll Structure Particulate Matter Screening

Intersection #	Intersection Name	AM LOS		AM Increment			AM HDDV	AM Screen		MD LOS		MD Increment			MD HDDV	MD Screen		LN LOS		LN Increment			LN HDDV	LN Screen	
		NB	BD	MT	Bus	HT	Total	LOS	HDDT	NB	BD	MT	Bus	HT	Total	LOS	HDDT	NB	BD	MT	Bus	HT	Total	LOS	HDDT
1	Hamilton Avenue, Clinton Street & West 9th Street	A	B	3	2	1	6	Pass	NA	B	B	-1	0	0	-1	Pass	NA	A	A	0	1	0	1	Pass	NA
2	Hamilton Avenue NB & West 9th Street	B	B	-2	0	-1	-3	Pass	NA	B	B	-5	0	0	-5	Pass	NA	B	A	-1	-1	-1	-3	Pass	NA

Table 11. Robert F. Kennedy Bridge Study Area - No-Action Alternative vs. Adopted Toll Structure Carbon Monoxide Screening

Intersection #	Intersection Name	AM LOS		AM Volume		AM Screen		PM LOS		PM Volume		PM Screen		LN LOS		LN Volume		LN Screen	LN Screen
		NB	BD	NB	BD	LOS	10% Volume	NB	BD	NB	BD	LOS	10% Volume	NB	BD	NB	BD	LOS	10% Volume
1	126th Street and 2nd Avenue	C	C	2084	2018	Pass	NA	C	C	2600	2441	Pass	NA	B	B	1310	1282	Pass	NA
2	125th Street and 2nd Avenue	C	D	2587	2610	Fail	Pass	C	E	2988	3060	Fail	Pass	C	C	1576	1693	Pass	NA
11	E 134th Street & St. Ann's Avenue	C	C	775	775	Pass	NA	C	C	665	665	Pass	NA	C	C	490	490	Pass	NA
22	St Ann's Ave and Bruckner Blvd	C	C	2415	2415	Pass	NA	C	C	2320	2320	Pass	NA	C	C	2265	2265	Pass	NA
17	31st St & Astoria Blvd	C	C	1243	1219	Pass	NA	E	D	1199	1155	Fail	Pass	B	B	954	832	Pass	NA
24	Hoyt N & 31st St	C	C	3076	3008	Pass	NA	B	B	2326	2186	Pass	NA	C	C	1956	1769	Pass	NA
3	Hoyt S & 31st St	C	D	1766	1773	Fail	Pass	C	C	1860	1838	Pass	NA	C	C	1594	1561	Pass	NA

Table 12. Robert F. Kennedy Bridge Study Area - No-Action Alternative vs. Adopted Toll Structure Particulate Matter Screening

Intersection #	Intersection Name	AM LOS		AM Increment			AM HDDV	AM Screen		PM LOS		PM Increment			PM HDDV	PM Screen		LN LOS		LN Increment			LN HDDV	LN Screen	
		NB	BD	MT	Bus	HT	Total	LOS	HDDT	NB	BD	MT	Bus	HT	Total	LOS	HDDT	NB	BD	MT	Bus	HT	Total	LOS	HDDT
1	126th Street and 2nd Avenue	C	C	-6	-3	0	-9	Pass	NA	C	C	-3	-7	0	-10	Pass	NA	B	B	-1	-1	0	-2	Pass	NA
2	125th Street and 2nd Avenue	C	D	-11	-2	-2	-15	Fail	Pass	C	E	-5	-10	0	-15	Fail	Pass	C	C	2	3	0	5	Pass	NA
11	E 134th Street & St. Ann's Avenue	C	C	0	0	0	0	Pass	NA	C	C	0	0	0	0	Pass	NA	C	C	0	0	0	0	Pass	NA
22	St Ann's Ave and Bruckner Blvd	C	C	0	0	0	0	Pass	NA	C	C	0	0	0	0	Pass	NA	C	C	0	0	0	0	Pass	NA
17	31st St & Astoria Blvd	C	C	0	0	0	0	Pass	NA	E	D	-1	0	0	-1	Fail	Pass	B	B	-1	1	0	0	Pass	NA
24	Hoyt N & 31st St	C	C	-3	-2	-2	-7	Pass	NA	B	B	-4	-2	0	-6	Pass	NA	C	C	-2	0	0	-2	Pass	NA
3	Hoyt S & 31st St	C	D	3	0	1	4	Fail	Pass	C	C	2	1	0	3	Pass	NA	C	C	0	0	1	1	Pass	NA

Table 13. Downtown Brooklyn Study Area - No-Action Alternative vs. Adopted Toll Structure Carbon Monoxide Screening

Intersection #	Intersection Name	Approach	AM LOS		AM Volume		AM Screen		LN LOS		LN Volume		LN Screen	
			NB	BD	NB	BD	LOS	10% Volume	NB	BD	NB	BD	LOS	10% Volume
1	Flatbush Avenue and Tillary Street	Intersection	F	F	4887	4446	Fail	Pass	D	D	4383	3811	Fail	Pass
2	Adam Street and Tillary Street	Intersection	D	D	2997	2997	Fail	Pass	C	C	2109	2152	Pass	NA
3	Old Fulton Street and Vine Street	Intersection	D	D	2805	1971	Fail	Pass	C	C	2062	1686	Pass	NA

Table 14. Downtown Brooklyn Study Area - No-Action Alternative vs. Adopted Toll Structure Particulate Matter Screening

Intersection #	Intersection Name	AM LOS		AM Increment			AM HDDV	AM Screen		LN LOS		LN Increment			LN HDDV	LN Screen	
		NB	BD	MT	Bus	HT	Total	LOS	HDDT	NB	BD	MT	Bus	HT	Total	LOS	HDDT
1	Flatbush Avenue and Tillary Street	F	F	-72	-12	-13	-97	Fail	Pass	D	D	-6	-8	-1	-15	Fail	Pass
2	Adam Street and Tillary Street	D	D	-1	-1	0	-2	Fail	Pass	C	C	-1	-2	0	-3	Pass	NA
3	Old Fulton Street and Vine Street	D	D	-5	-9	-1	-15	Fail	Pass	C	C	-2	-6	0	-8	Pass	NA

Table 15. Little Dominican Republic Study Area - No-Action Alternative vs. Adopted Toll Structure Carbon Monoxide Screening

Intersection #	Intersection Name	AM LOS		AM Volume		AM Screen		MD LOS		MD Volume		MD Screen		PM LOS		PM Volume		PM Screen	
		NB	BD	NB	BD	LOS	10% Volume	NB	BD	NB	BD	LOS	10% Volume	NB	BD	NB	BD	LOS	10% Volume
1	W 179th St & Broadway	C	C	813	823	Pass	Pass	C	C	1081	1142	Pass	Pass	C	C	1117	1144	Pass	Pass

Table 16. Little Dominican Republic Study Area - No-Action Alternative vs. Adopted Toll Structure Particulate Matter Screening

Intersection #	Intersection Name	AM LOS		AM Increment			AM HDDV	AM Screen		MD LOS		MD Increment			MD HDDV	MD Screen		PM LOS		PM Increment			PM HDDV	PM Screen	
		NB	BD	MT	Bus	HT	Total	LOS	HDDT	NB	BD	MT	Bus	HT	Total	LOS	HDDT	NB	BD	MT	Bus	HT	Total	LOS	HDDT
1	W 179th St & Broadway	C	C	17	82	0	99	Pass	NA	C	C	0	0	0	0	Pass	NA	C	C	0	0	0	0	Pass	NA

Table 17. Lower East Side Study Area- No-Action Alternative vs. Adopted Toll Structure Screening

Intersection #	Intersection Name	AM LOS		AM Volume		AM Screen		MD LOS		MD Volume		MD Screen		PM LOS		PM Volume		PM Screen	
		NB	BD	NB	BD	LOS	10% Volume	NB	BD	NB	BD	LOS	10% Volume	NB	BD	NB	BD	LOS	10% Volume
1	Park Row/Chatham Square & Worth/Oliver St & Mott St	C	C	1076	999	Pass	Pass	D	C	1050	862	Pass	Pass	D	C	1146	930	Pass	Pass
2	Chatham Square & E Broadway	C	C	791	714	Pass	Pass	C	C	885	697	Pass	Pass	D	C	1026	810	Pass	Pass
3	Chatham Square/Bowery & Divison St	B	C	816	739	Pass	Pass	B	B	845	657	Pass	Pass	B	C	1096	880	Pass	Pass

Table 18. Lower East Side Study Area- No-Action Alternative vs. Adopted Toll Structure Particulate Matter Screening

Intersection #	Intersection Name	AM LOS		AM Increment			AM HDDV	AM Screen		MD LOS		MD Increment			MD HDDV	MD Screen		PM LOS		PM Increment			PM HDDV	PM Screen	
		NB	BD	MT	Bus	HT	Total	LOS	HDDT	NB	BD	MT	Bus	HT	Total	LOS	HDDT	NB	BD	MT	Bus	HT	Total	LOS	HDDT
1	Park Row/Chatham Square & Worth/Oliver St & Mott St	C	C	-6	-3	0	-9	Pass	NA	D	C	-17	-7	0	-24	Pass	NA	D	C	-18	-8	0	-26	Pass	NA
2	Chatham Square & E Broadway	C	C	-9	-4	0	-13	Pass	NA	C	C	-21	-9	0	-30	Pass	NA	D	C	-23	-11	0	-34	Pass	NA
3	Chatham Square/Bowery & Divison St	B	C	-11	-4	0	-15	Pass	NA	B	B	-24	-7	0	-31	Pass	NA	B	C	-28	-10	0	-38	Pass	NA

Table 19. Maximum Truck Changes on Highway Links with Project – Adopted Toll Structure

Worst-Case Scenario	County	link #	Roadway	EJ Community	Maximum Change in Trucks	AADT - No Action	AADT - Scenario	Trucks - No Action	Trucks - Scenario	% Trucks - No Action	% Trucks - Scenario
10J	Queens	64851	TRIBOROUGH BRIDGE	yes	1,290	72,148	78,816	7,467	8,756	10%	11%
10J	New York	220571	TRIBOROUGH BRIDGE (SOUTH) - N	yes	1,290	72,057	78,725	7,467	8,756	10%	11%
10J	New York	64925	TRIBOROUGH BRIDGE	yes	1,218	42,009	45,018	6,554	7,772	16%	17%
10J	New York	64926	I 278	yes	1,218	42,009	45,018	6,554	7,772	16%	17%
10J	New York	90365	TRIBOROUGH BRIDGE	yes	1,218	42,009	45,018	6,554	7,772	16%	17%
10J	Bronx	64930	TRIBOROUGH BRIDGE (NORTH) - N	yes	1,216	45,875	48,358	6,711	7,927	15%	16%
10J	New York	64931	I 278	yes	1,216	45,875	48,358	6,711	7,927	15%	16%
10J	Bronx	64940	TRIBORO BR	yes	1,216	45,875	48,358	6,711	7,927	15%	16%
10J	Queens	64831	TRIBOROUGH BRIDGE	yes	1,144	67,666	81,271	8,044	9,188	12%	11%
10J	New York	64916	TRIBOROUGH BRIDGE (SOUTH) - S	yes	1,144	67,666	81,271	8,044	9,188	12%	11%
10J	Queens	220946	GRAND CENTRAL PKY	yes	918	55,367	57,646	5,005	5,923	9%	10%
10J	Bronx	64944	RAMP FROM TRIBORO	yes	888	21,072	23,978	3,765	4,653	18%	19%
10J	Queens	64878	GRAND CENTRAL PKY	yes	883	78,250	79,959	5,703	6,586	7%	8%
10J	Queens	64879	BROOKLYN QUEENS EXPY	yes	875	19,212	20,314	4,136	5,011	22%	25%
10J	Bronx	64945	MAJOR DEEGRAN EXPWY	yes	862	67,416	68,266	5,601	6,463	8%	9%
10J	Bronx	64953	I 87	yes	862	67,416	68,266	5,601	6,463	8%	9%

Table 20. Maximum Average Annual Daily Traffic (AADT) on Highway Links with Project – Adopted Toll Structure

Scenario	County	link #	Roadway	EJ Community	AADT - No Action	AADT - Scenario	Trucks - No Action	Trucks - Scenario	Change in Trucks	% Trucks - No Action	% Trucks - Scenario
T10J	Bergen	268133	I-95	Yes	124,642	129,962	18,019	18,428	409	14.5%	14.2%
T10J	Queens	64554	VAN WYCK EXPY	Yes	128,793	126,920	5,664	5,415	-249	4.4%	4.3%
T10J	Bergen	268077	I-95	Yes	120,803	126,308	17,101	17,543	441	14.2%	13.9%
T10J	Bergen	268116	I-95	Yes	120,803	126,308	17,101	17,543	441	14.2%	13.9%
T10J	Bergen	268128	I-95	Yes	120,803	126,308	17,101	17,543	441	14.2%	13.9%
T10J	Queens	64564	VAN WYCK EXPY	Yes	123,598	122,388	4,731	4,923	192	3.8%	4.0%
T10J	Bergen	268131	I-95	Yes	116,685	121,706	16,114	16,204	90	13.8%	13.3%
T10J	Queens	63972	VAN WYCK EXPY	Yes	119,688	119,405	4,081	4,100	19	3.4%	3.4%
T10J	Bergen	265316	SR 4	Yes	117,908	117,481	6,034	6,021	-13	5.1%	5.1%
T10J	Queens	64267	LONG ISLAND EXPY	Yes	119,833	117,048	8,426	8,244	-181	7.0%	7.0%
T10J	Bergen	266111	SR 4	Yes	117,502	116,646	7,057	7,064	7	6.0%	6.1%
T10J	Queens	64289	LONG ISLAND EXPY	Yes	117,103	115,616	6,571	6,511	-60	5.6%	5.6%
T10J	Queens	63969	VAN WYCK EXPY	Yes	116,087	115,223	4,975	5,110	136	4.3%	4.4%
T10J	New York	62217	CROSS BRONX EXP. BRIDGE - WB	Yes	109,815	112,166	18,166	18,632	466	16.5%	16.6%
T10J	Queens	64441	LONG ISLAND EXPY	Yes	113,419	112,000	7,434	7,171	-263	6.6%	6.4%
T10J	New York	62285	I 95	Yes	109,469	111,820	18,166	18,632	466	16.6%	16.7%
T10J	Bergen	263218	I-95 Bergen-Passaic Expwy	Yes	104,710	111,566	13,548	13,985	438	12.9%	12.5%

ANALYSIS RESULTS (PM HOT SPOT AT GEORGE WASHINGTON BRIDGE)

Table 21 - Predicted 24-hour PM_{10} Design Value Concentrations

SITE	ALTERNATIVE	BACKGROUND CONCENTRATION (μG/M³)	MODELED CONCENTRATION (μG/M³)	TOTAL CONCENTRATION* (μG/M³)	NAAQS (μg/m³)
I-95 west of the GWB	No Build	44	44	88	150
	Adopted Toll Structure		45	89	

* Total concentrations = modeled results + 24-hour PM_{10} background
μg/m³ = micrograms per cubic meter

Table 22 - Predicted 24-hour $PM_{2.5}$ Design Value Concentrations

SITE	ALTERNATIVE	BACKGROUND CONCENTRATION (μG/M³)	MODELED CONCENTRATION (μG/M³)	TOTAL CONCENTRATION* (μG/M³)	NAAQS (μg/m³)
I-95 West of the GWB	No Build	22.0	5.8	27.8	35.0
	Adopted Toll Structure		6.0	28.0	

* Total concentrations = modeled results + 24-hour $PM_{2.5}$ background
μg/m³ = micrograms per cubic meter

Table 23 - Predicted Annual $PM_{2.5}$ Design Value Concentrations

SITE	ALTERNATIVE	BACKGROUND CONCENTRATION (μG/M³)	MODELED CONCENTRATION (μG/M³)	TOTAL CONCENTRATION* (μG/M³)	NAAQS (μg/m³)
I-95 West of the GWB	No Build	9.0	1.8	10.8	12.0
	Adopted Toll Structure		1.9	10.9	

* Total concentrations = modeled results + Annual $PM_{2.5}$ background
μg/m³ = micrograms per cubic meter

Figure 1 – AERMOD Model Screenshot, I-95 west of GWB

Figure 2 – 24-Hour PM_{10} No Action Contours ($\mu g/m^3$), I-95 west of GWB

Figure 3 – 24-Hour PM_{10} Adopted Toll Structure- Contours (µg/m^3), I-95 west of GWB

Figure 4 – 24-Hour $PM_{2.5}$ No Action Contours (µg/m^3), I-95 west of GWB

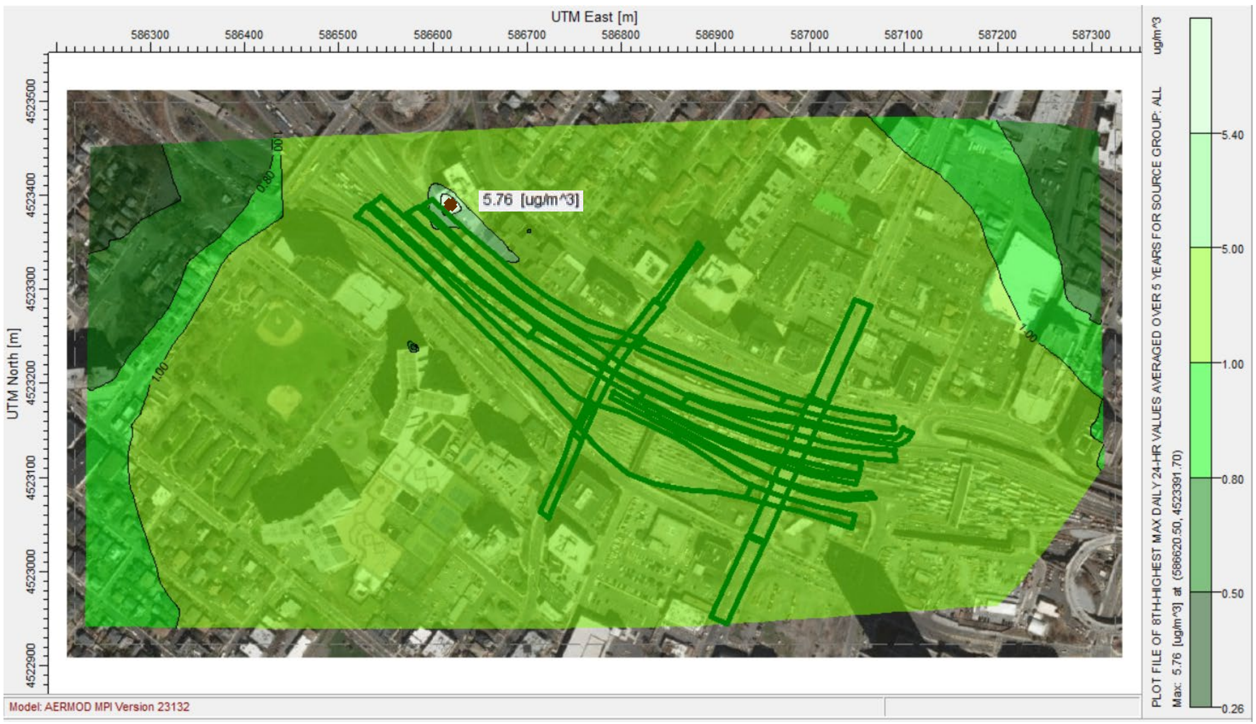
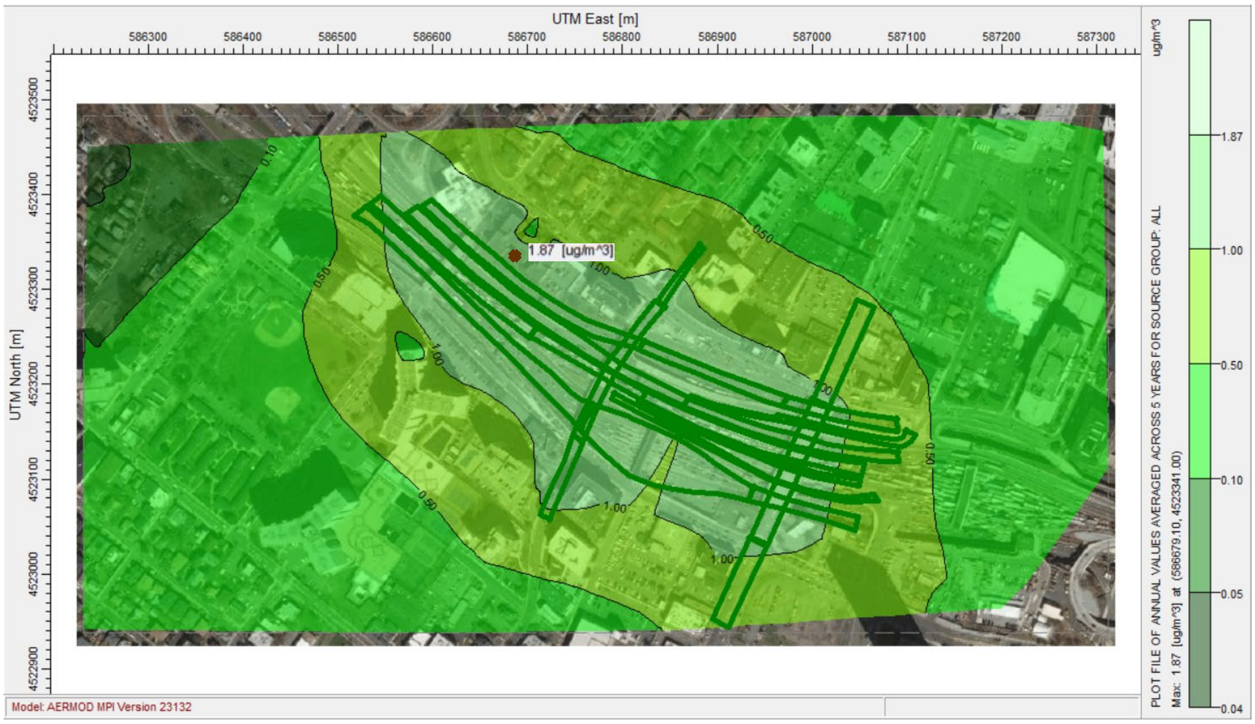


Figure 5 – 24-Hour $PM_{2.5}$ Adopted Toll Structure Contours (µg/m^3), I-95 west of GWB

Figure 6 – Annual $PM_{2.5}$ No Action Contours (µg/m^3), I-95 west of GWB

Figure 7 – Annual $PM_{2.5}$ Adopted Toll Structure Contours ($\mu g/m^3$), I-95 west of GWB



CENTRAL BUSINESS DISTRICT (CBD) TOLLING PROGRAM

Appendix 12, Noise

2024

LOCAL STREET NOISE ASSESSMENT

Table 1. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Downtown Brooklyn Study Area – With Action Peak Hour

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		LN	
						PCE	DW PCE	PCE	DW PCE
1	Flatbush Avenue and Tillary Street	NB	NBL	L	L	0.0	-0.6	0.0	-0.7
			NBT	T	T	-0.9		-1.7	
			NBR	R	R	0.0		-0.1	
		SB	SBT	T	T	-0.6	-0.6	-0.8	-0.7
			SBR	R	R	-0.6		-0.8	
		EB	EBL	L	L	-0.9	-0.1	-1.2	-0.2
			EBT	T	T	0.1		0.1	
			EBR	R	R	0.0		0.2	
		WB	WBL	L	L	-0.1	-0.6	-0.1	-0.6
			WBT	T	T	0.0		-0.1	
			WBR	R	R	-1.0		-2.1	

Table 1. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Downtown Brooklyn Study Area – With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		LN	
						PCE	DW PCE	PCE	DW PCE
2	Adams Street and Tillary Street	NB	NBL	L	L	0.0	-0.1	0.0	-0.4
			NBT	T	T	0.0		-0.3	
			NBR	T	R	0.0		0.0	
			NBR2	R	R2	-0.2		-0.9	
		SB	SBL	L	L	0.1	0.1	0.6	0.6
			SBT	T	T	0.1		0.6	
			SBR	R	R	0.0		0.0	
		EB	EBL	L	L	0.0	-0.1	0.0	-0.3
			EBT	T	T	-0.2		-1.1	
			EBR	R	R	0.0		0.0	
		WB	WBL	L	L	0.0	-0.1	-0.1	-0.2
			WBT	T	T	0.0		-0.1	
			WBR	R	R	0.0		0.0	
			WBR2	R	R2	-1.6		-1.9	
3	Old Fulton Street and Vine Street	NB	NBL	L	L	0.0	0.0	0.3	0.0
			NBT	T	T	0.0		0.2	
		SB	SBT	T	T	-0.1	-0.1	-0.5	-0.5

Table 2. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Little Dominican Republic Study Area - With Action Peak Hour

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		MD		PM	
						PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
1	W 179th St & Broadway	NB	NBL	L	L	3.0	2.7	2.5	2.8	1.3	**2.5**
			NBT	T	T	2.6		2.9		3.1	
		SB	SBT	T	T	3.0	2.8	1.9	1.6	1.6	0.9
			SBR	TR	R	2.2		1.1		-0.8	
		WB	WBL	TR	L	3.1	-0.1	1.9	-2.2	2.4	-2.8
			WBT		T	-1.1		-3.3		-4.0	
			WBR		R						

Table 3. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Long Island City Study Area – With Action Peak Hour

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM	
						PCE	DW PCE
1a	Pulaski Bridge / 11th Street & Jackson Avenue	NB	NBL	LT	L	0.0	0.0
			NBT	T	T	-0.1	
			NBR	R	R	0.2	
		SB	SBT	T	T	0.0	0.0
			SBR	TR	R	0.3	
		EB	EBL	LT	L	-1.5	-1.2
			EBT	T	T	-1.1	
		WB	WBL	L	L	-0.1	0.0
			WBT	T	T	0.2	
1b	11th Street & 48th Avenue	NB	NBL	L	L	0.0	-0.1
			NBT	T	T	-0.2	
		SB	SBT	T	T	0.0	0.0
			SBR	TR	R	0.0	
		WB	WBL	LTR	L	0.0	0.0
			WBT		T	0.0	
			WBR		R	0.0	

Table 3. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Long Island City Study Area – With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM	
						PCE	DW PCE
2	50th Avenue @ Vernon Blvd	NB	NBT	T	T	-0.2	-0.2
			NBR	R	R	0.4	
		SB	SBL	LT	L	1.1	0.1
			SBT		T	0.0	
		EB	EBL	LTR	L	0.0	0.3
			EBT		T	0.7	
			EBR		R	0.0	
3	Green Street & McGuiness Blvd	NB	NBT	T	T	-0.1	-0.1
			NBR	TR	R	0.0	
		SB	SBL	L	L	0.0	-0.1
			SBT	T	T	-0.1	
		EB	EBL	LTR	L	0.0	0.0
			EBT		T	0.0	
			EBR		R	0.0	
4	McGuinness Blvd & Freeman Street	NB	NBT	T	T	-0.1	-0.1
		SB	SBT	T	T	-0.1	-0.1
			SBR	TR	R	0.0	
		WB	WBR	R	R	-0.5	-0.5

Table 3. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Long Island City Study Area – With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM PCE	AM DW PCE
5	21st Street & 49th Avenue	NB	NBL	LTR	L	0.0	0.0
			NBT		T	0.0	
			NBR		R	0.0	
		SB	SBL	LTR	L	0.0	-0.1
			SBT		T	-0.1	
			SBR		R	0.0	
		EB	EBL	LTR	L	-0.2	-0.3
			EBT		T	-0.3	
			EBR		R	-0.4	
		WB	WBL	LT	L	0.0	0.0
			WBT		T	0.0	
			WBR	R	R	0.0	
7	11th Street & Borden Avenue	NB	NBL	LTR	L	-0.3	-0.4
			NBT		T	-0.1	
			NBR		R	-1.6	
		SB	SBL	LTR	L	-1.3	-1.2
			SBT		T	0.0	
			SBR		R	-1.2	
		EB	EBL	LTR	L	0.1	0.1
			EBT		T	0.0	
			EBR		R	-1.6	
		WB	WBL	LTR	L	0.0	-0.2
			WBT		T	0.0	
			WBR		R	-1.3	

Table 3. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Long Island City Study Area – With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM	
						PCE	DW PCE
8a	Van Dam Street & QMT Expwy	NB	NBL	LT	L	-0.1	-0.1
			NBT	T	T	-0.1	
		SB	SBT	T	T	-0.5	-0.5
			SBR	TR	R	-0.1	
		WB	WBT	T	T	-0.2	-0.1
			WBR	TR	R	0.0	
8b	Van Dam Street & Borden Avenue	NB	NBT	T	T	-0.1	-0.1
			NBR	TR	R	0.0	
		SB	SBL	L	L	-0.3	-0.3
			SBT	T	T	-0.5	
		EB	EBL	LTR	L	-0.2	0.0
			EBT		T	0.0	
			EBR		R	0.0	
9	Jackson Ave / Northern Blvd & Queens Plaza	NB	NBL	LT	L	0.0	-1.1
			NBT		T	-1.2	
			NBR	TR	R	-0.3	
		SB	SBL	LT	L	0.0	0.1
			SBT	T	T	0.1	
		EB	EBT	T	T	-0.6	-0.6
			EBR	R	R	-0.6	
		WB	WBL	LT	L	0.0	-0.1
			WBT	T	T	-0.1	
			WBR	TR	R	0.0	

Table 3. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Long Island City Study Area – With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM	
						PCE	DW PCE
10	Thomson Avenue & Van Dam Street	NB	NBL	L	L	-7.6	-2.1
			NBT	T	T	0.0	
			NBR	TRR2	R	0.0	
			NBR2		R2	0.0	
		SB	SBT	T	T	-0.7	-0.7
			SBR	R	R	-0.8	
		EB	EBR	R	R	-0.2	-0.1
			EBR2	R2	R2	-0.1	
		WB	WBT	T	T	0.0	0.0
11a	Thomson Avenue & Dutch Kills Street	SB	SBL	L	L	0.0	0.0
			SBR	LR	R	0.0	
		EB	EBT	T	T	-0.2	-0.2
		WB	WBT	T	T	0.0	0.0
			WBR	R	R	0.0	
11b	Thomson Avenue & Dutch Kills Street	WB	WBT	T	T	0.0	-0.1
			WBR	R	R	-0.6	
		EB	EBT	T	T	-0.2	-0.2
12	21st Street & Queens Plaza N	NB	NBL	LT	L	0.0	-0.1
			NBT	T	T	-0.1	
		SB	SBT	T	T	0.0	-0.1
			SBR	R	R	-0.6	
		WB	WBL	LTR	L	-0.1	-0.1
			WBT		T	-0.7	
			WBR		R	0.0	

Table 4. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Lower East Side Study Area – With Action Peak Hour

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		MD		PM	
						PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
1	Park Row/Chatham Square & Worth/Oliver St & Mott St	NB	NBL	LT	L	0.0	-0.1	0.0	-0.2	0.0	-0.3
			NBT		T	0.0		0.0		0.0	
			NBR2	R	R2	-0.3		-0.5		-0.6	
		SB	SBL	T	T	-0.7	-0.5	-0.5	-0.4	-0.8	-0.6
			SBT	TR	T	0.0		0.0		0.0	
			SBR		R	0.0		0.0		0.0	
		EB	EBT	TR	T	0.0	0.0	0.0	0.0	0.0	0.0
			EBR		R	0.0		0.0		0.0	
		WB	WBL	L	L	-0.9	-0.7	-3.7	-2.3	-3.7	-2.1
			WBT	T	T	0.0		0.0		0.0	
			WBR	TR	R	-0.8		-2.8		-2.4	
		SWB	SWL2	LR	L2	0.0	0.0	0.0	0.0	0.0	0.0
			SWL		L	0.0		0.0		0.0	
			SWR		R	0.0		0.0		0.0	
2	Chatham Square & E Broadway	NB	NBL	L	L	0.0	0.0	0.0	0.0	0.0	0.0
			NBR	R	R	0.0		0.0		0.0	
		EB	EBT	T	T	-0.6	-0.4	-0.8	-0.4	-1.0	-0.6
			EBR	R	R	0.0		0.0		0.0	
		WB	WBL	L	L	0.0	-0.8	0.0	-2.5	0.0	-2.4
			WBT	T	T	-1.3		-4.6		-4.3	

Table 4. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Lower East Side Study Area - With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		MD		PM	
						PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
3	Chatham Square/Bowery & Division St	NB	NBL	L	L	0.0	0.0	0.0	0.0	0.0	0.0
			NBR	T	T	0.0		0.0		0.0	
		EB	EBT	T	T	-0.5	-0.5	-0.6	-0.6	-0.9	-0.9
			EBR2	TR	R2	0.0		0.0		0.0	
		WB	WBL	LT	L	0.0	-1.4	0.0	-3.6	0.0	-5.4
			WBT	T	T	-1.5		-3.7		-5.6	

Table 5. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Lower Manhattan Study Area – With Action Peak Hour

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		MD		PM	
						PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
1	Trinity Place & Edgar Street	NB	NBL	LT	L	0.0	-2.7	0.0	-4.9	0.0	0.0
			NBT	T	T	-2.7		-4.9		0.0	
		EB	EBL	L	L	0.0	0.0	0.6	0.6	0.0	0.0
2	Trinity Place & Rector Street	NB	NBT	T	T	-1.7	-1.7	-0.5	-0.5	-0.2	-0.3
			NBR	R	R	-1.5		0.2		-5.0	
		EB	EBL	LT	L	0.0	-0.0	0.0	-0.0	-0.9	-0.7
			EBT		T	-0.1		0.0		-0.1	
3a	HCT Entrance/Exit & West Street	NB	NBT	T	T	-0.1	0.0	-0.3	-0.1	-0.2	-0.3
			NBR2	R2	R2	0.2		0.1		-0.3	
		SB	SBT	T	T	-0.1	-0.1	-0.2	-0.2	-0.3	-0.3
		WB	WBL	L	L	0.0	0.0	0.2	0.2	0.0	0.0
3b	HCT Exit & West Street & West Thames Street	NB	NBT	T	T	-0.1	-0.1	-0.3	-0.3	-0.2	-0.2
		SB	SBT	T	T	-0.1	-0.1	-0.2	-0.2	-0.3	-0.3
			SBR	R	R	0.0		0.0		0.0	
		EB	EBR	R	R	0.0	0.0	0.0	0.0	0.0	0.0
		WB	WBR	R	R	0.0	0.0	0.2	0.2	0.0	0.0

Table 5. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Lower Manhattan Study Area - With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		MD		PM	
						PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
4	Chambers Street & Centre Street	NB	NBL	L	L	-0.4	-0.4	-0.8	-0.8	-0.8	-0.7
			NBT	T	T	-0.4		-0.8		-0.7	
		SB	SBT	TR	T	-0.5	-0.5	-0.5	-0.5	-1.1	-1.1
			SBR		R	-0.6		-0.8		-1.0	
		EB	EBR	R	R	0.0	0.0	0.1	0.1	-0.4	-0.4
5a	Canal Street & Hudson Street/Holland Tunnel On-Ramp	NB	NBL	LTR	L	0.0	-0.1	0.0	-0.5	0.0	-0.2
			NBT		T	0.0		0.0		0.0	
			NBR		R	-0.9		-1.5		-0.7	
			NBR2	R2	R2	0.0		-0.4		-1.0	
		EB	EBL2	L2L	L2	0.0	-0.5	-0.1	-0.9	0.0	-0.5
			EBL		L	-1.2		-1.8		-0.9	
			EBT	T	T	-0.2		-0.4		-0.4	
		WB	WBT	T	T	-0.8	-0.8	-2.0	-2.0	0.0	0.0
			WBR	R	R	-1.2		-1.8		0.0	
5b	Canal Street & Holland Tunnel On-Ramp	EB	EBT	T	T	-0.3	-0.3	-0.6	-0.6	-0.4	-0.4
		WB	WBT	T	T	-0.9	-0.4	-2.1	-1.2	0.0	-0.1
			WBR	R	R	0.0		0,0		0.0	
7a	Canal Street S & West Street	NB	NBT	T	T	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
			NBR	R	R	-0.2		-0.7		0.0	
		SB	SBL	L	L	-0.3	-0.2	-0.9	-0.3	-0.6	-0.4
			SBT	T	T	-0.1		-0.2		-0.4	

Table 5. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Lower Manhattan Study Area - With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		MD		PM	
						PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
7b	Canal Street N & West Street	NB	NBT	T	T	0.0	0.0	-0.1	-0.1	-0.1	-0.1
		SB	SBT	T	T	-0.1	-0.1	-0.3	-0.3	-0.4	-0.4
		WB	WBL	LR	L	0.0	0.0	0.0	0.0	0.0	0.0
			WBR		R	0.0		0.0		0.0	
9	West Street & Albany Street	NB	NBT	T	T	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
			NBR	TR	R	0.0		0.0		-0.2	
		SB	SBL		L	-5.3	0.0	0.0	-0.1	0.0	-0.3
			SBT	T	T	0.0		-0.1		-0.3	
			SBR	R	R	-0.1		-0.1		-0.1	
		EB	EBL	L	L	0.0	0.0	2.7	0.7	0.0	0.0
			EBT	T	T	0.0		-1.1		0.0	
			EBR	R	R	0.1		0.0		0.0	
10	West Street & Vesey Street	NB	NBL	L	L	0.0	-0.1	0.0	-0.2	0.0	-0.2
			NBT	T	T	-0.1		-0.2		-0.2	
		SB	SBT	T	T	0.0	0.0	-0.1	-0.1	-0.2	-0.2
			SBR	R	R	-0.1		-0.1		-0.1	
		EB	EBL	L	L	0.0	0.0	-0.1	0.0	0.0	-0.0
			EBR	R	R	0.0		0.0		0.0	
		WB	WBL	LT	L	0.0	0.0	0.0	0.0	0.0	0.0
			WBT		T	0.0		0.0		0.0	
			WBR	R	R	0.0		0.0		0.0	

Table 5. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Lower Manhattan Study Area - With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		MD		PM	
						PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
11	West Street & Chambers Street	NB	NBT	T	T	-0.2	-0.1	-0.3	-0.3	-0.3	-0.3
			NBR	TR	T	0.0		-0.2		-0.2	
		SB	SBL	L	L	-0.1	-0.1	-0.1	-0.1	-0.4	-0.3
			SBT	T	T	0.0		-0.1		-0.3	
			SBR	R	R	-0.1		-0.2		-0.2	
		EB	EBL	LTR	L	-0.1	0.0	-0.1	-0.1	0.0	0.0
			EBT		T	0.0		0.0		0.0	
			EBR		R	0.0		0.0		0.0	
		WB	WBL	LT	L	0.0	0.0	0.0	-0.1	0.0	0.0
			WBT		T	0.0		0.0		0.0	
			WBR	R	R	0.0		-0.1		0.0	
14	Canal Street/Manhattan Bridge & Bowery	EB	EBT	T	T	-0.7	-0.7	-1.6	-1.4	-1.1	-1.0
			EBR	R	R	0.0		-0.2		-0.3	
		WB	WBT	T	T	-0.7	-0.7	-1.0	-1.0	-2.0	-2.0
		NB	NBT	T	T	0.0	-0.7	-0.2	-1.7	-0.2	-1.2
			NBR	R	R	-0.7		-1.7		-1.2	
		SB	SBL	L	L	-1.3	-1	-2.3	-1.6	-2.2	-2.4
			SBT	TR	T	-0.5		-1.2		-3.4	
			SBR		R	-0.7		-0.7		-1.0	
15	Manhattan Bridge & Bowery	NB	NBT	T	T	-0.1	-0.1	-0.3	-0.3	-0.3	-0.3
		SB	SBT	T	T	-1.0	-1.0	-1.9	-1.9	-2.4	-2.4
		WB	WBR	R	R	-1.7	-1.7	-2.8	-2.8	-2.7	-2.7

Table 5. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Lower Manhattan Study Area - With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		MD		PM	
						PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
18	6th Avenue & Watts Street	WB	WBT	TR	T	-0.3	-0.3	-0.5	-0.5	-0.4	-0.4
			WBR		R	0.0		-0.1		0.0	
		NB	NBL	LT	L	-0.6	-0.4	-1.1	-0.7	-1.2	-1.1
			NBT		T	-0.4		-0.7		-1.0	
19	Canal Street & 6th Avenue/Laight Street	NEB	NER	R	R	-0.4	-0.4	-0.9	-0.9	-1.1	-1.1
		NB	NBL	LTR	L	-0.2	-0.3	-0.5	-0.5	-0.7	-0.8
			NBT		T	-0.3		-0.4		-0.8	
			NBR		R	0.0		-1.2		-1.2	
		EB	EBT	T	T	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4
		WB	WBT	TR	T	-0.3	-0.3	-0.4	-0.3	-0.3	-0.5
			WBR		R	-0.3		-0.3		-0.5	

Table 6. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Queens Midtown Tunnel Study Area – With Action Peak Hour (No Mitigation)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	MD		LN	
						PCE	DW PCE	PCE	DW PCE
1	E 37th Street & 3rd Avenue	NB	NBL	L	L	-1.0	-0.4	-0.6	-0.4
			NBT	T	T	-0.4		-0.4	
		WB	WBT	T	T	0.0	0.0	0.0	0.0
			WBR	R	R	0.0		0.1	
2	E 36th Street & 2nd Avenue	SB	SBL	L	L	-0.7	-0.2	-0.6	-0.3
			SBT	T	T	-0.1		-0.2	
		EB	EBT	T	T	-0.5	-0.4	-0.4	-0.4
			EBR	TR	R	0.0		-0.3	
		WB	WBL	L	L	0.0		0.0	
3	E 34th Street & 3rd Avenue	NB	NBL	LT	L	-0.1	-0.4	-0.1	-0.3
			NBT	T	T	-0.5		-0.3	
			NBR	R	R	-0.3		-0.1	
		EB	EBT	T	T	-0.5	-0.5	-0.6	-0.6
		WB	WBT	T	T	-0.3	-0.3	-0.5	-0.5
			WBR	R	R	-0.1		-0.3	
4	E 35th Street & 3rd Avenue	NB	NBL	LT	L	-0.2	-0.4	-0.2	-0.3
			NBT	T	T	-0.4		-0.3	
		WB	WBT	T	T	-0.4	-0.3	-0.6	-0.6
			WBR	TR	R	-0.1		-0.4	

Table 6. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Queens Midtown Tunnel Study Area - With Action Peak Hour (No Mitigation) (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	MD		LN	
						PCE	DW PCE	PCE	DW PCE
5	E 34th Street & 2nd Ave	SB	SBL	L	L	0.0	-0.1	-0.1	-0.2
			SBT	T	T	-0.1		-0.2	
			SBR	R	R	-0.4		-0.2	
		EB	EBT	T	T	-0.3	-0.2	-0.2	-0.2
			EBR	TR	R	0.0		-0.1	
		WB	WBT	T	T	-0.5	-0.5	-0.5	-0.5
6	E 35th Street & 2nd Ave	SB	SBT	T	T	-0.1	-0.1	-0.2	-0.2
			SBR	R	R	-0.2		-0.1	
		EB	EBR	R	R	0.0	0.0	-0.3	-0.3
		WB	WBT	T	T	-0.1	-0.1	-0.4	-0.4
			WBL	L	L	-0.1		-0.3	

Table 7. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Red Hook Study Area – With Action Peak Hour

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		MD		LN	
						PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
1	Hamilton Avenue, Clinton Street & West 9th Street	EB	EBT	TR	T	0.0	0.0	-0.2	-0.2	0.0	0.0
			EBR		R	0.0		0.0		0.0	
		NB	NBL	LT	L	0.0	-0.0	0.0	-0.1	0.0	-0.3
			NBT		T	0.0		-0.1		-0.3	
		SB (at West 9th)	SBT	TR	T	0.1	0.1	0.0	0.0	0.1	0.1
			SBR		R	0.0		0.0		0.0	
		SB (at Clinton St)	SBL	L	L	0.1	0.1	0.0	0.0	0.0	0.0
			SBT	LTR	T	0.1		0.0		0.0	
			SBR		R	0.0		0.0		0.0	
		WB	WBL	L	L	0.0	0.0	0.0	0.0	0.0	0.0
			WBT	T	T	0.0		0.0		0.0	
2	Hamilton Avenue NB & West 9th Street	NB	NBT	T	T	-0.1	-0.1	-0.1	-0.1	-0.4	-0.4
		WB	WBR	R	R	0.0	-0.0	-0.2	-0.2	-0.4	-0.4

Table 81. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - RFK Bridge Study Area – With Action Peak Hour

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		PM		LN	
						PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
1	126th Street and 2nd Avenue	NW	NWL2	L	L2	0.0	0.0	0.0	0.0	0.0	0.0
			NWL		L	0.0		0.0		0.0	
			NWR	R	R	0.0		0.0		0.0	
		SB	SBT	TR	T	-0.2	-0.2	-0.4	-0.4	-0.1	-0.2
			SBR		R	-0.1		-0.5		-0.8	
		WB	WBL	L	L	-0.2	-0.1	-0.3	-0.3	0.0	-0.1
			WBT	T	T	-0.1		-0.4		-0.1	
			WBR	R	R	-0.1		-0.4		-0.2	
2	125th Street and 2nd Avenue	SB	SBL	L	L	0.0	-0.3	-0.2	-0.4	0.4	-0.3
			SBT	TR	T	-0.4		-0.6		-0.3	
			SBR		R	-0.4		-0.7		-0.9	
		SW	SWL	L	L	0.6	0.6	2.0	2.0	0.3	0.3
			SWR	R	R	0.6		2.0		0.3	
		EB	EBT	TR	T	0.3	0.2	0.3	0.3	1.1	1.0
			EBR		R	0.0		0.0		0.0	
		WB	WBL	LT	L	-3.5	-3.2	-3.4	-3.6	-0.5	-3.9
			WBT		T	-3.1		-3.7		-4.2	

Table 8. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - RFK Bridge Study Area - With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		PM		LN	
						PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
11	E 134th Street & St. Ann's Avenue	NB	NBT	TR	T	0.0	0.0	0.0	0.0	0.0	0.0
			NBR		R	0.0		0.0		0.0	
		SB	SBL	LT	L	0.0	0.0	0.0	0.0	0.0	0.0
			SBT		T	0.0		0.0		0.0	
		EB	EBL	LTR	L	0.0	0.0	0.0	0.0	0.0	0.0
			EBT		T	0.0		0.0		0.0	
			EBR		R	0.0		0.0		0.0	
22	St Ann's Ave and Bruckner Blvd	NB	NBL	LTR	L	0.0	0.0	0.0	0.0	0.0	0.0
			NBT		T	0.0		0.0		0.0	
			NBR		R	0.0		0.0		0.0	
		SB	SBL	LTR	L	0.0	0.0	0.0	0.0	0.0	0.0
			SBT		T	0.0		0.0		0.0	
			SBR		R	0.0		0.0		0.0	
		EB	EBL	LTR	L	0.0	0.0	0.0	0.0	0.0	0.0
			EBT		T	0.0		0.0		0.0	
			EBR		R	0.0		0.0		0.0	
		WB	WBL	LTR	L	0.0	0.0	0.0	0.0	0.0	0.0
			WBT		T	0.0		0.0		0.0	
			WBR		R	0.0		0.0		0.0	

Table 8. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - RFK Bridge Study Area - With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	AM		PM		LN	
						PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
17	31st St & Astoria Blvd	NB	NBT	T	T	-0.9	-0.9	0.4	0.5	-7.4	-6.8
			NBR	R	R	-0.5		1.5		-3.4	
		SB	SBT	T	T	-0.1	-0.1	-0.5	-0.5	-0.4	-0.4
			SBR	R	R	-0.1		-0.5		-0.4	
		EB	EBL	L	L	0.4	0.2	0.3	0.2	0.0	0.5
			EBT	T	T	0.2		0.2		0.5	
			EBR	R	R	0.1		0.1		0.5	
24	Hoyt N & 31st St	NB	NBL	L	L	-0.8	-1.2	0.9	0.3	-8.6	-5.2
			NBT	T	T	-1.2		0.1		-3.2	
		SB	SBT	T	T	-0.3	-0.2	-3.3	-1.4	-1.3	-1.1
			SBR	R	R	0.0		-0.1		-0.2	
		WB	WBL	L	L	0.0	-0.0	0.0	-0.2	0.0	-0.1
			WBT	T	T	0.0		-0.2		-0.1	
			WBR	R	R	0.0		0.0		0.0	
3	Hoyt S & 31st St	NB	NBT	T	T	-0.7	-0.7	0.3	0.4	-6.8	-6.2
			NBR	R	R	-1.1		0.8		1.0	
		SB	SBL	L	L	0.0	-0.1	0.0	-0.4	0.0	-0.3
			SBT	T	T	-0.1		-0.4		-0.4	
		EB	EBL	L	L	0.2	0.3	0.0	0.1	0.8	0.6
			EBT	T	T	0.3		0.2		0.6	
			EBR	R	R	0.1		-0.2		-0.5	

Table 9. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Upper East Side Study Area – With Action Peak Hour

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	LN	
						PCE	DW PCE
1	E 60th Street & Queensboro Bridge Exit	NB	NBL	LTR	L	-2.6	-4.3
			NBT		T	-8.3	
			NBR		R	-2.8	
		EB	EBL	LT	L		-3.2
			EBT		T	-3.2	
2	E 60th Street & 3rd Ave	NB	NBL	L	L	-5.7	-3.3
			NBT	T	T	-3.1	
		WB	WBT	T	T	-6.4	-8.6
			WBR	R	R	-13.7	
3	E 60th Street & York Ave	NB	NBT	T	T	-2.8	-2.8
		SB	SBT	T	T	-2.6	-2.6
		EB	EBL	L	L	-0.7	-1.3
			EBT	LT	T	0.0	
			EBR	R	R	-2.8	
		WB	WBL	L	L	0.0	0.0
			WBT	T	T	0.0	
			WBR	R	R	0.0	

Table 9. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Upper East Side Study Area - With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	LN	
						PCE	DW PCE
4	E 59th Street & 2nd Ave	EB	EBT	T	T	-8.8	-7.0
			EBR	RR2	R	4.1	
			EBR2		R2	6.4	
		SB	SBL2	L2	L2	-9.1	-5.6
			SBL	L2L	L	5.6	
			SBT	T	T	-4.0	
5	E 60th Street & 2nd Ave	NWB	NWL2	L2	L2	-9.0	-9.2
			NWL	L	L	-9.4	
		SB	SBL2	L2	L2	3.3	-4.5
			SBT	TR	T	-4.8	
			SBR		R	0.3	
		WB	WBL	LT	L	1.2	-0.8
			WBT	T	T	-15.6	
6	E 60th Street & 1st Ave	NB	NBT	T	T	-3.4	-3.2
			NBR	TR	R	0.5	
		EB	EBL	L	L	-3.8	-3.0
			EBT	T	T	-2.2	
7	E 60th Street & Lexington Ave	SB	SBT	T	T	-3.3	-3.4
			SBR	R	R	-5.3	
		WB	WBL	L	L	-4.5	-6.2
			WBT	T	T	-6.5	
8a	E 60th Street & Park Ave NB	NB	NBL	LT	L	-2.7	-3.3
			NBT	T	T	-2.9	
			WBT	T	T	-7.8	
			WBR	TR	R	-8.7	

Table 9. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Upper East Side Study Area - With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	LN	
						PCE	DW PCE
8b	E 60th Street & Park Ave NB	SB	SBT	T	T	-2.6	-2.5
			SBR	TR	R	-1.4	
		WB	WBL	L	L	-3.1	-6.4
			WBT	T	T	-7.2	
9	E 60th Street & Madison Ave	NB	NBL	L	L	-7.3	-3.2
			NBT	T	T	-2.7	
		WB	WBT	T	T	-4.7	-5.4
			WBR	TR	R	-8.5	
10	E 62nd Street & Queensboro Bridge Exit	NB	NBT	T	T	1.8	0.9
			NBR	R	R	-0.1	
		EB	EBL	LT	L	-5.9	-5.2
			EBT	T	T	-5.2	
11	E 60th Street & 5th Ave	SB	SBT	T	T	-4.5	-4.3
			SBR	R	R	-3.1	
		WB	WBL	L	L	-4.8	-5.8
			WBT	T	T	-6.6	
12	E 63rd Street & York Ave	NB	NBT	T	T	-4.5	-3.8
			NBR	TR	R	-3.2	
		SB	SBL	L	L	-0.3	-1.9
			SBT	T	T	-2.5	
			SBR	TR	R	-4.0	
		WB	WBL	L	L	-1.1	-2.0
			WBT	LT	T	-1.8	
			WBR	TR	R	-7.1	

Table 9. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Upper East Side Study Area - With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	LN	
						PCE	DW PCE
13	E 53rd Street & FDR Drive	SB	SBR	R	R	-3.6	-3.6
		SWB	SWR	R	R	0.9	0.9
14	E 61st Street & 5th Ave	SB	SBT	T	T	-3.6	-3.6
		WB	WBL	L	L	-7.4	-7.4
15	E 65th Street & 5th Ave	SB	SBL	LT	L	-2.8	-3.1
			SBT	T	T	-3.1	
		EB	EBT	T	T	-2.3	-2.4
			EBR	R	R	-3.1	
16	E 66th Street & 5th Avenue	SB	SBT	T	T	-3.9	-3.5
			SBR	TR	R	-2.1	
		WB	WBL	LT	L	-0.2	-0.6
			WBT	T	T	-0.7	
17	E 79th Street & 5th Ave	SB	SBL	LT	L	-0.4	-4.0
			SBT	T	T	-4.1	
			SBR	TR	R	-4.5	
		EB	EBT	T	T	-2.9	-3.2
			EBR	R	R	-4.5	
		WB	WBL	L	L	-7.2	-3.4
			WBT	T	T	-2.7	

Table 9. Adopted Toll Structure Estimated Directional Weighted PCE Noise Level Changes - Upper East Side Study Area - With Action Peak Hour (Continued)

Intersection #	Intersection Name	Approach	Movement	Lane Group	Movement	LN	
						PCE	DW PCE
18	E 71st Street & York Ave	NB	NBL	LT	L	-7.7	-4.5
			NBT	T	T	-4.3	
			NBR	TR	R	0.0	
		SB	SBL	LT	L	0.0	-3.8
			SBT	LTR	T	-3.6	
			SBR	TR	R	-4.5	
		WB	WBL	L	L	-2.4	-2.5
			WBT	TR	T	-2.6	
			WBR		R	-2.5	

ANALYSIS AND FINDINGS: LOCAL (NEIGHBORHOOD) EFFECTS RELATED TO TRAFFIC DIVERSIONS

Truck Traffic

Non-Truck Traffic

Regional and Placed-Based Mitigation

As noted in the Final EA and above, the Project Sponsors will implement regional and place-based mitigation measures to potential Project-related traffic diversions, related air pollutants, and associated health effects in communities that are already overburdened by pre-existing air pollution and chronic diseases, relative to national percentiles. Table 17.13, below, shows the mitigation measures committed to by the Project Sponsors with the funding amounts committed to in the Final EA as well as the funding amounts committed to with the adopted toll structure.

Benefits and Allocation of Funding for Mitigation Measures

Benefits of Regional Mitigation Measures

Regionwide, 151 census tracts have been identified for having potential truck traffic proximity increases, and for being in the 90th percentile for at least one pre-existing pollutant burden OR in the 90th percentile for at least one pre-existing chronic disease burden. These tracts will benefit from the commitments to regional mitigation measures. Under the adopted tolling structure, a total of $148M has been dedicated to these regional mitigation measures. This commitment includes:

- $123M to deeply discount the overnight toll
- $20M to expand the NYC Clean Trucks Program
- $5M to expand the NYCDOT Off-Hours Delivery Program

Discounted Overnight Toll[1]

Without a discounted overnight toll, some drivers might divert to other routes to avoid the toll. The discounted overnight toll would benefit communities along diversion routes, including EJ communities, as drivers are less likely to divert due to the discounted rate. Additionally, all drivers entering the CBD during the overnight period would benefit from the lower toll. Specifically, the distribution of drivers into the CBD during the overnight period from each crossing that would benefit from the discounted toll is as follows[2]:

- 39.4% from vehicles crossing into the CBD from 60th Street
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[1] The adopted toll structure includes an overnight toll discounted beyond the mitigation commitment in the Final EA. The overnight E-ZPass rate is 25% of the peak toll rate from 9 pm – 5 am weekdays and 9 pm – 9 am weekends.
[2] See Appendix 4A.2, Table 4A.2-3, p. Appendix 4A.2-6

- 17.5% from vehicles crossing into the CBD from Queens

Expansion of NYC Clean Trucks Program

Trucks with more than 70% of their Vehicle-Miles Traveled in the tri-state (NY/NJ/CT) area are eligible for funding to replace old diesel trucks to lower-emission electric, hybrid, compressed natural gas, and clean diesel vehicles. This commitment would result in reduced emissions across the entirety of the replacement trucks' trips, through communities throughout the region, including those environmental justice communities with preexisting burdens that could have increased ruck traffic proximity as a result of the adopted tolling structure.

Expansion of NYCDOT Off-Hours Delivery Program

NYCDOT will expand its off-hours delivery program to reduce daytime truck traffic, reduce emissions, and increase roadway safety. This program focuses on shifting truck deliveries from peak periods to off-hours. It is available to all users and would result in a reduction of truck trips during daytime hours on access routes from any origin.

Allocation of Place-Based Mitigation Funding by Community

The Final EA concluded that specific census tracts that would experience increased or decreased traffic proximity changed depending on the tolling scenario, but that the affected communities remain largely the same. Under the adopted toll structure, the affected census tracts and communities have been identified, confirming that the same communities would be affected as predicted in the Final EA. With the completion of this analysis for the adopted toll structure, as contemplated by the Final EA and FONSI, the Project Sponsors have refined the allocation of place-based mitigation funds as outlined in Final EA Table 17-16, which commits a total of $100M to place-based mitigation measures. This includes:

- $15M for the Replacement of Transport Refrigeration Units (TRUs) at Hunts Point Produce Market
- $20M to Implement Electric Truck Charging Infrastructure
- $10M to Install Roadside Vegetation
- $25M to Renovate Parks and Greenspace
- $10M to Install Air Filtration Units in Schools Near Highways
- $20M to Establish an Asthma Case Management Program and Bronx Center

To determine how the $100M should be allocated across communities, the share of population in all affected tracts was used, as illustrated in Table X.A.

Table X.A. Placed-Based Mitigation Measures Funding Allocation

COMMUNITY IDENTIFIED FOR PLACE-BASED MITIGATION	TOTAL POPULATION	SHARE OF POPULATION IN ALL AFFECTED TRACTS	ALLOCATED FUNDS
Crotona - Tremont	51,133	22.6%	$22.6M
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Northeast Bronx	9,912	4.4%	$4.4M
Pelham - Throgs Neck	37,608	16.6%	$16.6M
Downtown Brooklyn-Fort Greene	12,819	5.7%	$5.7M
South Williamsburg	16,807	7.4%	$7.4M
East Harlem	9,968	4.4%	$4.4M
Randall's Island	2,009	0.9%	$0.9M
Fort Lee	3,159	1.4%	$1.4M
City of Orange	1,925	0.9%	$0.9M
East Orange	4,124	1.8%	$1.8M
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As outlined in the Final EA, several of the six mitigation strategies have been targeted to specific communities, as follows:

- Replacement of Transport Refrigeration Units (TRUs) at Hunts Point Market. In the Final EA, the amount allocated for this mitigation measure is $15M; as noted above, this community in the Bronx is eligible for $18.9M of the place-based mitigation funding.
- Implementation of electric charging infrastructure will be implemented through the Federal Carbon Reduction Program (CRP) using funds received by NYSDOT and will, therefore, be limited to locations in New York. However, given that 4.8% of the trucks with destinations in New York City, come from or pass through New Jersey on a daily basis, NJ communities will benefit from this mitigation. Thus, of the $20M allocated for this, NJ will have a benefit of roughly $1.0M related to this mitigation measure. However, as the benefits would be most concrete where charging infrastructure is located, this benefit is not deducted from allocations to New Jersey communities.
- Expansion of the existing NYC Asthma Care Management Program and a Bronx Asthma Center, which will occur throughout New York City and in the Bronx, respectively. In the Final EA, the amount allocated for this combination mitigation measure is $20M; the Bronx communities in

total are eligible for $71.8M, and New York City communities combined are eligible for $90.2M, inclusive of the $71.8M.

All communities are eligible for the remaining three mitigation strategies – installation of roadside vegetation, renovation of parks and greenspace, and installation of air filtration units in schools near highways. Together, the financial commitment for these strategies totals $45M.

As outlined in the Final EA, Project Sponsors will engage with the Environmental Justice Community Group (EJCG), relevant communities that merit place-based mitigation, and local implementing agencies to determine which of the specific place-based mitigation measures as described above are appropriate for each community within the allocated funds, and exactly where they should be sited.

The siting process will comply with all commitments made in the Final EA, be transparent to interested stakeholders including the general public, press, and elected officials, and ensure the projects are additive (i.e. not already funded and announced work). The specific site selection methodology for place-based mitigation is described below.

1. Analyze Existing Conditions in Communities and Assess Suitability of Mitigation Measures

   For the identified communities, publicly available data relevant to the suitability of each type of place-based mitigation measure will be collected. Preliminary data and information to be collected will depend on the availability of data sets; additional data will be included as identified and appropriate. Additional data may also be collected from other relevant agencies during this step, such as information related to relevant planned and programmed projects.

   Geospatial analysis will be performed to determine the suitability of each mitigation measure for a given community, as well as consideration of the location of mitigation measures for which the location has been determined (i.e., Hunt's Point Produce Market TRUs). For example, in communities where only one mitigation measure is feasible, that mitigation will be sited in that community and the distribution of the remaining mitigation measures will consider this.

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   Engage EJCG to solicit feedback on MTA's approach to the site-selection process. The Project Sponsors will walk through the approach, providing details on what has been done to date. The EJCG will have the opportunity to provide input for the next phase of site selection refinement.

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   Meet with relevant agencies to review the initial suitability analysis and identify other factors that may influence site selection such as implementation approach, needs assessments, and other feasibility factors.

4. Refine Analysis and Mapping of Potential Sites and Ensure an Equitable Distribution of Mitigation Measures

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CENTRAL BUSINESS DISTRICT (CBD) TOLLING PROGRAM

REEVALUATION

April 2024

Federal Lead Agency

U.S. Department of Transportation
Federal Highway Administration

Project

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

MTA

NEW YORK CITY DOT

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Draft, Privileged and Confidential – for discussion purposes only; data still being assessed.

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1 Introduction

In June 2023, the Federal Highway Administration (FHWA) issued a Finding of No Significant Impact (FONSI) for the Central Business District (CBD) Tolling Program. The FONSI was based on the April 2023 Final Environmental Assessment (EA), with committed mitigation.

At that time, seven tolling scenarios were presented in the Final EA and FONSI representing a range of toll structures to evaluate their ability to meet the needs of the Project and the resultant environmental effects. The MTA Reform and Traffic Mobility Act (the Act) requires that a Traffic Mobility Review Board (TMRB) be established to recommend a toll structure to the TBTA Board, in order for the TBTA Board to thereafter propose and adopt a toll structure through a state ratemaking process pursuant to New York's State Administrative Procedure Act (SAPA). Accordingly, the seven tolling scenarios, were developed with different assumptions regarding toll rates, peak periods, and potential discounts, exemptions, and crossing credits, in order to explore and disclose the range of effects that could occur as a result of the CBD Tolling Program. Recognizing that the TMRB could recommend a toll structure that mirrored one of the tolling scenarios, or could recommend different parameters, and that the TBTA Board could choose to adopt a different toll structure, the FONSI contemplated a reevaluation, prepared pursuant to 23 CFR § 771, once the TBTA Board adopted the CBD Tolling Program toll structure.[1]

In November 2023, the TMRB issued a report detailing its tolling recommendations. In accordance with SAPA, the TBTA Board authorized the TMRB's tolling recommendations to be filed in the form of a proposed toll structure, and held a public comment period that included four public hearings. On March 27, 2024, the TBTA Board voted to adopt a final schedule of toll rates as well as associated exemptions, crossing credits, and discounts, referred to in this reevaluation as the "adopted toll structure." The adopted toll structure is the same as recommended by the TMRB with several clarifications incorporated.

The TBTA-adopted toll structure is being reevaluated to determine if the FONSI is still valid. This requires that TBTA demonstrate to FHWA that the effects of the adopted toll structure are consistent with the effects disclosed in the Final EA and that the mitigation is still valid.

The following sections provide the results of analyses conducted for the reevaluation. For ease of comparison, the sections follow the same order for the resource area analyses as the Final EA. Where appropriate, and to provide context, tables with analysis results from the Final EA are provided, side by side with the results of the adopted toll structure.

Based on the analyses conducted for the reevaluation, the Project Sponsors have concluded that the effects of the adopted toll structure are consistent with or less impactful than the effects documented in the Final

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[1] Federal Highway Administration, *Finding of No Significant Impact, Central Business District (CBD) Tolling Program*, https://new.mta.info/document/114186, p. 26.

EA, and that when considered with the mitigation commitments in the Final EA, the Final EA and FONSI remain valid.

Table 1.1 provides a summary of the effects of the adopted toll structure in comparison to the effects presented in the Final EA. The table is a re-creation of the table that was provided in the Final EA as Table ES-5 and Table 16-1, now modified to include the adopted toll structure.

Table 1.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
4A – Transportation: Regional Transportation Effects and Modeling	Vehicle Volumes	▪ Decreases in daily vehicle trips to Manhattan CBD overall. ▪ Some diversions to different crossings to Manhattan CBD or around the Manhattan CBD altogether, depending on tolling scenario. As traffic, including truck trips, increase on some circumferential highways, simultaneously there is a reduction in traffic on other highway segments to the CBD. ▪ Diversions would increase or decrease traffic volumes at local intersections near the Manhattan CBD crossings. ▪ Overall decrease in vehicle-miles traveled (VMT) in the Manhattan CBD and region overall in all tolling scenarios and some shift from vehicle to transit mode.	Crossing locations to Manhattan CBD	% Increase or decrease in daily vehicles entering the Manhattan CBD relative to No Action Alternative	-15%	-16%	-17%	-19%	-20%	-18%	-17%	No	**No mitigation needed.** Beneficial effects	-17%	No	**No mitigation needed.** Same as Final EA
	Auto Journeys to CBD		Manhattan CBD	% Increase or decrease in worker auto journeys to Manhattan CBD relative to No Action Alternative	-5%	-5%	-7%	-9%	-11%	-10%	-6%	No	**No mitigation needed.** Beneficial effects	-6%	No	**No mitigation needed.** Same as Final EA
				Absolute increase or decrease in daily worker auto trips to Manhattan CBD relative to No Action Alternative	-12,571	-12,883	-17,408	-24,017	-27,471	-24,433	-14,578			-16,447		
	Truck Trips Through CBD		Manhattan CBD	Increase or decrease in daily truck trips through Manhattan CBD (without origin or destination in the CBD) relative to No Action Alternative	-4,645 (-55%)	-4,967 (-59%)	-5,253 (-63%)	-5,687 -68%)	-6,604 (-79%)	-6,784 (-81%)	-1,734 (-21%)	No	**No mitigation needed.** Beneficial effects	-4,627 (-55%)	No	**No mitigation needed.** Same as Final EA
	Transit Journeys		Manhattan CBD	% Increase or decrease in daily Manhattan CBD-related transit journeys relative to No Action Alternative	+1.2%	+1.2%	+1.7%	+2.2%	+2.5%	+2.1%	+1.5%	No	**No mitigation needed.** No adverse effects	+1.6%	No	**No mitigation needed.** Same as Final EA
	Traffic Results		Manhattan CBD	% Increase or decrease in daily VMT relative to No Action Alternative	-7.8%	-7.6%	-8.0%	-8.7%	-9.2%	-7.1%	-8.4%	No	**No mitigation needed.** Beneficial effects in Manhattan CBD, New York City (non-CBD), north of New York City, and Connecticut; although there would be VMT increases in Long Island and New Jersey, the effects would not be adverse.	-8.9%	No	**No mitigation needed.** Same as Final EA
			NYC (non-CBD)		-0.3%	-0.2%	-0.7%	-0.9%	-1.0%	-0.7%	-0.3%			-0.4%		
			NY north of NYC		-0.2%	-0.2%	-0.4%	-0.6%	-0.8%	-0.5%	-0.3%			-0.4%		
			Long Island		+0.1%	0.0%	-0.1%	-0.2%	-0.2%	0.0%	0.0%			0.0%		
			New Jersey		+0.0%	+0.0%	+0.2%	+0.2%	+0.1%	+0.2%	+0.1%			+0.1%		
			Connecticut		-0.1%	-0.2%	-0.2%	-0.2%	-0.2%	0.0%	-0.2%			-0.3%		

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<table>
<tr><th rowspan="2">EA CHAPTER</th><th rowspan="2">TOPIC</th><th rowspan="2">SUMMARY OF EFFECTS</th><th rowspan="2">LOCATION</th><th rowspan="2">DATA SHOWN IN TABLE</th><th colspan="7">FINAL EA TOLLING SCENARIO</th><th rowspan="2">POTENTIAL ADVERSE EFFECT</th><th rowspan="2">MITIGATION AND ENHANCEMENTS</th><th rowspan="2">ADOPTED TOLL STRUCTURE</th><th rowspan="2">POTENTIAL ADVERSE EFFECT</th><th rowspan="2">MITIGATION AND ENHANCEMENTS</th></tr>
<tr><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th></tr>
<tr><td rowspan="4">4B – Transportation: Highways and Local Intersections</td><td rowspan="3">Traffic – Highway Segments</td><td rowspan="3">The introduction of the CBD Tolling Program may produce increased congestion on highway segments approaching on circumferential roadways used to avoid Manhattan CBD tolls, resulting in increased delays and queues in midday and PM peak hours on certain segments in some tolling scenarios:
▪ Westbound Long Island Expressway (I-495) near the Queens-Midtown Tunnel (midday)
Approaches to westbound George Washington Bridge on I-95 (midday)
▪ Southbound and northbound FDR Drive between East 10th Street and Brooklyn Bridge (PM)
▪ Other locations will see an associated decrease in congestion particularly on routes approaching the Manhattan CBD</td><td>10 highway segments (AM)</td><td rowspan="3">Highway segments with increased delays and queues in peak hours that would result in adverse effects</td><td colspan="7">0 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D)</td><td rowspan="3">Yes</td><td rowspan="3">Mitigation needed. The Project Sponsors will implement a monitoring plan prior to implementation with post-implementation data collected approximately three months after the start of tolling operations and including thresholds for effects; if the thresholds are reached or crossed, the Project Sponsors will implement Transportation Demand Management (TDM) measures, such as ramp metering, motorist information, signage at all identified highway locations with adverse effects upon implementation of the Project. NYSDOT owns and maintains the relevant segments of the Long Island Expressway and I-95. The relevant segment of the FDR Drive is owned by NYSDOT south of Montgomery Street and NYCDOT north of Montgomery Street. Implementation of TDM measures will be coordinated between the highway owners and the owners of any assets relevant to implementing the TDM.

Post-implementation of TDM measures, the Project Sponsors will monitor effects and, if needed, TBTA will modify the toll rates, crossing credits, exemptions, and/or discounts to reduce adverse effects.</td><td>AM - 1 out of 10 highway corridors (Westbound Long Island Expressway (I-495) near the Queens-Midtown Tunnel)</td><td rowspan="3">Yes</td><td rowspan="3">No additional mitigation needed. The Project Sponsors will implement the mitigation commitments of the Final EA.</td></tr>
<tr><td>10 highway segments (midday)</td><td colspan="7">2 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F</td><td>Midday - 1 out of 10 highway corridors (approaches to westbound George Washington Bridge on I-95)</td></tr>
<tr><td>10 highway segments (PM)</td><td colspan="7">1 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F</td><td>PM - 1 out of 10 highway corridors (Southbound and northbound FDR Drive between East 10th Street and Brooklyn Bridge)</td></tr>
<tr><td>Intersections</td><td>Shifts in traffic patterns, with increases in traffic at some locations and decreases at other locations, would change conditions at some local intersections within and near the Manhattan CBD. Of the 102 intersections analyzed, most intersections would see reductions in delay.

Potential adverse effects on four local intersections in Manhattan:
▪ Trinity Place and Edgar Street (midday)
▪ East 36th Street and Second Avenue (midday)
▪ East 37th Street and Third Avenue (midday)
▪ East 125th Street and Second Avenue (AM, PM)</td><td>4 locations</td><td>Number of locations with potential adverse effects that will be addressed with signal timing adjustments</td><td colspan="7">4 in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F</td><td>Yes</td><td>Mitigation needed. NYCDOT will monitor those intersections where potential adverse effects were identified and implement appropriate signal timing adjustments to mitigate the effect, per NYCDOT's normal practice.

Enhancement
Refer to the overall enhancement on monitoring at the end of this table.</td><td>Potential adverse effects at 1 location:
East 125th Street at Second Avenue (PM)</td><td>Yes</td><td>No additional mitigation needed. The mitigation commitment remains for East 125th Street at Second Avenue; for the other three locations identified in the Final EA, NYCDOT is maintaining the commitment to implement the measures identified in the Final EA as an enhancement.</td></tr>
</table>

Table1.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
4B – Transportation: Highways and Local Intersections	Traffic – Highway Segments	The introduction of the CBD Tolling Program may produce increased congestion on highway segments approaching on circumferential roadways used to avoid Manhattan CBD tolls, resulting in increased delays and queues in midday and PM peak hours on certain segments in some tolling scenarios: ▪ Westbound Long Island Expressway (I-495) near the Queens-Midtown Tunnel (midday) Approaches to westbound George Washington Bridge on I-95 (midday) ▪ Southbound and northbound FDR Drive between East 10th Street and Brooklyn Bridge (PM) ▪ Other locations will see an associated decrease in congestion particularly on routes approaching the Manhattan CBD	10 highway segments (AM)	Highway segments with increased delays and queues in peak hours that would result in adverse effects	0 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D)							Yes	**Mitigation needed.** The Project Sponsors will implement a monitoring plan prior to implementation with post-implementation data collected approximately three months after the start of tolling operations and including thresholds for effects; if the thresholds are reached or crossed, the Project Sponsors will implement Transportation Demand Management (TDM) measures, such as ramp metering, motorist information, signage at all identified highway locations with adverse effects upon implementation of the Project. NYSDOT owns and maintains the relevant segments of the Long Island Expressway and I-95. The relevant segment of the FDR Drive is owned by NYSDOT south of Montgomery Street and NYCDOT north of Montgomery Street. Implementation of TDM measures will be coordinated between the highway owners and the owners of any assets relevant to implementing the TDM. Post-implementation of TDM measures, the Project Sponsors will monitor effects and, if needed, TBTA will modify the toll rates, crossing credits, exemptions, and/or discounts to reduce adverse effects.	AM - 1 out of 10 highway corridors (Westbound Long Island Expressway (I-495) near the Queens-Midtown Tunnel)	Yes	**No additional mitigation needed.** The Project Sponsors will implement the mitigation commitments of the Final EA.
			10 highway segments (midday)		2 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F									Midday - 1 out of 10 highway corridors (approaches to westbound George Washington Bridge on I-95)		
			10 highway segments (PM)		1 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F									PM - 1 out of 10 highway corridors (Southbound and northbound FDR Drive between East 10th Street and Brooklyn Bridge)		
	Intersections	Shifts in traffic patterns, with increases in traffic at some locations and decreases at other locations, would change conditions at some local intersections within and near the Manhattan CBD. Of the 102 intersections analyzed, most intersections would see reductions in delay. Potential adverse effects on four local intersections in Manhattan: ▪ Trinity Place and Edgar Street (midday) ▪ East 36th Street and Second Avenue (midday) ▪ East 37th Street and Third Avenue (midday) ▪ East 125th Street and Second Avenue (AM, PM)	4 locations	Number of locations with potential adverse effects that will be addressed with signal timing adjustments	4 in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F							Yes	Mitigation needed. NYCDOT will monitor those intersections where potential adverse effects were identified and implement appropriate signal timing adjustments to mitigate the effect, per NYCDOT's normal practice. **Enhancement** Refer to the overall enhancement on monitoring at the end of this table.	Potential adverse effects at **1 location:** East 125th Street at Second Avenue (PM)	Yes	**No additional mitigation needed.** The mitigation commitment remains for East 125th Street at Second Avenue; for the other three locations identified in the Final EA, NYCDOT is maintaining the commitment to implement the measures identified in the Final EA as an enhancement.

Table 1.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
4C – Transportation: Transit	Transit Systems	The Project would generate a dedicated revenue source for investment in the transit system. Transit ridership would increase by 1 to 2 percent systemwide for travel to and from the Manhattan CBD, because some people would shift to transit rather than driving. Increases in transit ridership would not result in adverse effects on line-haul capacity on any transit routes.	New York City Transit	% Increase or decrease in total AM peak period boardings systemwide	1.5%	1.6%	1.7%	1.9%	2.0%	1.9%	1.8%	No	**No mitigation needed.** No adverse effects	1.7%	No	**No mitigation needed.** No adverse effects
			PATH		0.8%	0.7%	1.4%	1.6%	2.0%	1.8%	1.6%			1.3%		
			Long Island Rail Road		0.6%	0.9%	1.1%	1.5%	2.0%	1.3%	1.0%			1.0%		
			Metro-North Railroad		0.6%	0.8%	1.3%	1.7%	1.4%	1.9%	0.8%			1.4%		
			NJ TRANSIT commuter rail		0.3%	0.5%	1.0%	1.5%	2.3%	1.7%	1.0%			0.9%		
			MTA/NYCT Buses		1.3%	1.3%	1.5%	1.5%	1.6%	1.6%	1.2%			1.3%		
			NJ TRANSIT Bus		0.7%	0.5%	0.6%	0.7%	1.1%	1.0%	0.7%			0.9%		
			Other buses (suburban and private operators)		0.2%	0.0%	0.9%	0.7%	0.5%	0.5%	0.1%			0.2%		
			Ferries (Staten Island Ferry, NYC Ferry, NY Waterway, Seastreak)		2.5%	2.7%	3.1%	3.2%	3.1%	3.6%	2.7%			2.9%		
			Roosevelt Island Tram		1.8%	1.7%	2.0%	2.2%	2.6%	2.5%	1.7%			2.9%		
	Bus System Effects	Decreases in traffic volumes within the Manhattan CBD and near the 60th Street boundary of the Manhattan CBD would reduce the roadway congestion that adversely affects bus operations, facilitating more reliable, faster bus trips.	Manhattan local buses	% Increase or decrease at maximum passenger load point	0.5%	0.5%	0.7%	1.1%	1.2%	0.9%	0.7%	No	**No mitigation needed.** No adverse effects	0.5%	No	**No mitigation needed.** No adverse effects
			Bronx express buses		-1.6%	2.0%	2.2%	-0.5%	2.0%	1.5%	-2.5%			0.6%		
			Queens local and express buses (via Ed Koch Queensboro Bridge)		2.2%	2.0%	2.3%	2.3%	2.5%	2.8%	2.0%			2.2%		
			Queens express buses (via Queens-Midtown Tunnel)		0.3%	0.2%	0.4%	0.8%	1.1%	0.8%	0.6%			0.5%		
			Brooklyn local and express buses		0.8%	1.0%	0.6%	0.7%	0.7%	0.8%	2.6%			0.5%		
			Staten Island express routes (via Brooklyn)		4.0%	4.5%	4.4%	3.8%	3.9%	3.7%	3.5%			3.9%		
			Staten Island express routes (via NJ)		1.0%	1.9%	2.3%	2.8%	1.8%	1.8%	2.4%			1.3%		
			NJ/West of Hudson buses (via Holland Tunnel)		-1.4%	-0.9%	-0.3%	1.4%	-0.9%	-0.6%	-1.4%			1.9%*		
			NJ/West of Hudson buses (via Lincoln Tunnel)		0.4%	0.6%	0.4%	0.6%	1.5%	1.1%	0.6%			0.8%		

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DOT_0046240

Table 1.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
4C – Transportation: Transit (Cont'd)	Transit Elements	Increased ridership would affect passenger flows with the potential for adverse effects at certain vertical circulation elements (i.e., stairs and escalators) in five transit stations: ▪ Hoboken Terminal, Hoboken, NJ PATH station ▪ Times Sq-42 St/42 St-Port Authority Bus Terminal subway station in the Manhattan CBD (N, Q, R, W, and S; Nos. 1, 2, 3, and 7; and A, C, E lines) ▪ Flushing-Main St subway station, Queens (No. 7 line) ▪ 14th Street-Union Square subway station in the Manhattan CBD (Nos. 4, 5, and 6; and L, N, Q, R, W lines) ▪ Court Square subway station, Queens (No. 7 and E, G, M lines)	Hoboken Terminal–PATH station (NJ) Stair 01/02	Net passenger increases or at stair in the peak hour	45	72	122	164	240	205	139	Yes	**Mitigation needed for Tolling Scenarios E and F.** TBTA will coordinate with NJ TRANSIT and PANYNJ to monitor pedestrian volumes on Stair 01/02 one month prior to commencing tolling operations to establish a baseline, and two months after Project operations begin. If a comparison of Stair 01/02 passenger volumes before and after implementation shows an incremental change that is greater than or equal to 205, then TBTA will coordinate with NJ TRANSIT and PANYNJ to implement improved signage and wayfinding to divert some people from Stair 01/02, and supplemental personnel if needed.	140	No	**No mitigation needed.** TBTA is maintaining its commitment to implement the mitigation measures identified in the Final EA as an enhancement
			42 St-Times Square–subway station (Manhattan) Stair ML6/ML8 connecting mezzanine to uptown 1/2/3 lines subway platform	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	63%	59%	68%	82%	100%	82%	56%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, TBTA will coordinate with MTA NYCT to remove the center handrail and standardize the riser, so that the stair meets code without the hand rail. The threshold will be set to allow for sufficient time to implement the mitigation so that the adverse effect does not occur.	60%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA
			Flushing-Main St subway station (Queens)–Escalator E456 connecting street to mezzanine level	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	116%	91%	108%	116%	100%	133%	72%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, MTA NYCT will increase the speed from 100 feet per minute (fpm) to 120 fpm.	110%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA.
			Union Sq subway station (Manhattan)–Escalator E219 connecting the L subway line platform to the Nos. 4/5/6 line mezzanine	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	63%	82%	87%	102%	100%	95%	61%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, MTA NYCT will increase the escalator speed from 100 fpm to 120 fpm.	77%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA.
			Court Sq subway station (Queens)–Stair P2/P4 to Manhattan-bound No. 7 line	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	98%	90%	102%	104%	100%	117%	97%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, TBTA will coordinate with MTA NYCT to construct a new stair from the northern end of the No. 7 platform to the street. The threshold will be set to allow for sufficient time to implement the mitigation so that the adverse effect does not occur.	102%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA

Table 1.1 - Modified Final EA Table ES-5, Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
4D – Transportation: Parking	Parking Conditions	All tolling scenarios would result in a reduction in parking demand within the Manhattan CBD of a similar magnitude to the reduction in auto trips into the Manhattan CBD. With a shift from driving to transit, there would be increased parking demand at subway and commuter rail stations and park-and-ride facilities outside the Manhattan CBD.	Manhattan CBD	Narrative	Reduction in parking demand due to reduction in auto trips to CBD							No	**No mitigation needed.** Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects
			Transit Facilities	Narrative	Small changes in parking demand at transit facilities, corresponding to increased commuter rail and subway ridership							No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects

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					A	B	C	D	E	F	G					
4E – Transportation: Pedestrians and Bicycles	Pedestrian Circulation	Increased pedestrian activity on sidewalks outside transit hubs because of increased transit use. At all but one location in the Manhattan CBD (Herald Square/Penn Station), the increase in transit riders would not generate enough new pedestrians to adversely affect pedestrian circulation in the station area. Outside the Manhattan CBD, transit usage at individual stations would not increase enough to adversely affect pedestrian conditions on nearby sidewalks, crosswalks, or corners.	Herald Square/Penn Station NY	Sidewalks, corners, and crosswalks with pedestrian volumes above threshold in AM / PM peak periods	Adverse effects on pedestrian circulation at one sidewalk segment and two crosswalks							Yes	**Mitigation needed.** The Project Sponsors will implement a monitoring plan at this location. The plan will include a baseline, specific timing, and a threshold for additional action. If that threshold is reached, NYCDOT will increase pedestrian space on sidewalks and crosswalks via physical widening and/or removing or relocating obstructions.	Pedestrian volumes at key transit stations/hubs would be similar to and those predicted in Final EA. Adverse effects are no longer predicted at Herald Square.	No	**Mitigation is no longer needed.** The Project Sponsors will implement the mitigation commitment described in the Fina EA as an enhancement
	Bicycles	Small increases in bicycle trips near transit hubs and as a travel mode	Manhattan CBD	Narrative	Small increases in bicycle trips near transit hubs with highest increases in pedestrian trip share							No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects
			Outside Manhattan CBD	Narrative	Some shifts from automobile to bicycles							No	**No mitigation needed**. No adverse effects		No	**No mitigation needed**. No adverse effects
	Safety	No adverse effects	Overall	Narrative	No substantial increases in pedestrian volumes or increased safety concerns, including at existing identified high-crash locations. Overall, with fewer vehicular trips entering and exiting the Manhattan CBD, the CBD Tolling Alternative could result in reduced traffic volumes at these locations. This would help to reduce vehicle-vehicle and vehicle-pedestrian conflicts, leading to an overall benefit to safety.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects

Table 1.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
5A – Social Conditions: Population	Benefits	Benefits in and near the Manhattan CBD	28-county study area	Narrative	Benefits in and near the Manhattan CBD related to travel-time savings, improved travel-time reliability, reduced vehicle operating costs, improved safety, reduced air pollutant emissions, and predictable funding source for transit improvements. This would positively affect community connections and access to employment, education, healthcare, and recreation for residents.							No	**No mitigation needed.** Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects
	Community Cohesion	Changes to travel patterns, including increased use of transit, resulting from new toll	28-county study area	Narrative	Changes to travel patterns, including increased use of transit, as a result of the Project would not adversely affect community cohesion or make it more difficult for people to connect with others in their community, given the extensive transit network connecting to the Manhattan CBD and the small change in trips predicted.							No	**No mitigation needed.** No adverse effects (see “Environmental Justice” for mitigation related to increased costs for low-income drivers).	Same as Final EA	No	**No mitigation needed.** Beneficial effects
	Indirect Displacement	No notable changes in socioeconomic conditions or cost of living so as to induce potential involuntary displacement of residents	Manhattan CBD	Narrative	The Project would not result in the potential for indirect (involuntary) residential displacement. It would not result in substantial changes to market conditions so as to lead to changes in housing prices, given that real estate values in the Manhattan CBD are already high and the many factors that affect each household’s decisions about where to live. In addition, low-income residents of the CBD would not experience a notable increase in the cost of living as a result of the Project because of the lack of change in housing costs, the many housing units protected through New York’s rent-control, rent-stabilization, and other similar programs, the tax credit available to CBD residents with incomes of up to $60,000, and the conclusion that the cost of goods would not increase as a result of the Project (see “Economic Conditions”).							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
	Community Facilities and Services	Increased cost for community facilities and service providers in the Manhattan CBD, their employees who drive, and clientele who drive from outside the CBD	Manhattan CBD	Narrative	The Project would increase costs for community service providers that operate vehicles into and out of the Manhattan CBD and for people who travel by vehicle to community facilities and services in the Manhattan CBD, as well as residents of the CBD and employees of community facilities who use vehicles to travel to community facilities outside the CBD. Given the wide range of travel options other than driving, the cost for users to drive to community facilities and services would not constitute an adverse effect on community facilities and services.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
	Effects on Vulnerable Social Groups	Benefits to vulnerable social groups from new funding for MTA Capital Program	28-county study area	Narrative	The Project would benefit certain vulnerable social groups, including elderly populations, persons with disabilities, transit-dependent populations, and non-driver populations by creating a funding source for the MTA 2020–2024 Capital Program (and subsequent capital programs and by reducing congestion in the Manhattan CBD). Elderly individuals would benefit from the travel-time and reliability improvements to bus service with the CBD Tolling Alternative, as bus passengers tend to be older than riders on other forms of transit, such as the subway and, as described above, bus passengers in the Manhattan CBD would benefit from travel-time savings due to the decrease in congestion. People over the age of 65 with a qualifying disability receive a reduced fare on MTA subways and buses, and elderly individuals with a qualifying disability can also receive MTA’s paratransit service, including taxis and FHVs operating on behalf of MTA to transport paratransit users. Elderly people with disabilities and low-income individuals who drive to the Manhattan CBD would be entitled to the same mitigation and enhancements proposed for low-income and disabled populations, in general. Other elderly individuals who drive to the Manhattan CBD would pay the toll.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
	Access to Employment	Increased cost for small number of people who drive to work	28-county study area	Narrative	Decrease in work trips by driving modes to and within the Manhattan CBD, with an offsetting increase in transit ridership. Those who drive despite the CBD toll would do so based on the need or convenience of driving and would benefit from the reduced congestion in the Manhattan CBD. Negligible effect (less than 0.1%) on travel to employment within the Manhattan CBD and reverse-commuting from the CBD due to the wide range of transit options available and the small number of commuters who drive today.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects

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DOT_0046243

Table 1.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

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					A	B	C	D	E	F	G					
5B – Social Conditions: Neighborhood Character	Neighborhood character	No notable change in neighborhood character	Manhattan CBD	Narrative	The changes in traffic patterns on local streets would not change the defining elements of the neighborhood character of the Manhattan CBD.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
			Area near 60th Street Manhattan CBD boundary	Narrative	Changes in parking demand near the 60th Street CBD boundary (including increases just north of 60th Street and decreases just to the south) would not create a climate of disinvestment that could lead to adverse effects on neighborhood character nor alter the defining elements of the neighborhood character of this area.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
5C – Social Conditions: Public Policy	Public policy	No effect	28-county study area	Narrative	The Project would be consistent with regional transportation plans and other public policies in place for the regional study area and the Manhattan CBD.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects

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DOT_0046244

Table 1.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
6 – Economic Conditions	Benefits	Regional economic benefits	28-county study area	Narrative	Economic benefit through congestion relief in terms of travel-time savings and travel-time reliability improvements, which would increase productivity and utility, as well as safety improvements and reduced vehicle operating costs associated with reductions in congestion.							No	**No mitigation needed**. Beneficial effects	Same as Final EA	No	**No mitigation needed**. Beneficial effects
	Economic Effects of Toll Costs	Cost of new toll for workers and businesses in the CBD that rely on vehicles	Manhattan CBD	Narrative	No adverse effects to any particular industry or occupational category in the Manhattan CBD. Given the high level of transit access in the CBD and high percentage of transit share, the toll would affect only a small percentage of the overall workforce. This would not adversely affect operations of businesses in the Manhattan CBD or the viability of any business types, including the taxi/FHV industry.							No	**No mitigation needed.** No adverse effects **Enhancements** The Project Sponsors commit to establishing a Small Business Working Group (SBWG) that will meet 6 months prior and 6 months after Project implementation, and annually thereafter, to solicit ongoing input on whether and how businesses are being affected. As part of mitigation for other topics, TBTA will ensure the overnight toll for trucks and other vehicles is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m. in the final CBD toll structure; this will also benefit some workers and businesses.	Same as Final EA	No	**No mitigation needed.** No adverse effects The Project Sponsors will implement the Enhancements described in the Final EA.
	Price of Goods	Cost of new toll would not result in changes in the cost of most consumer goods	Manhattan CBD	Narrative	Not anticipated to result in meaningful change in cost for most consumer goods. Any cost increase associated with the new toll in the CBD Tolling Alternative that would be passed along to receiving businesses would be distributed among several customers per toll charge (since trucks make multiple deliveries) especially for businesses, including small businesses and micro-businesses, receiving smaller deliveries. This would minimize the cost to any individual business. Some commodity sectors (construction materials, electronics, beverages) are more prone to increases due to less competition within delivery market.							No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
	Taxi and FHV Industry	Depending on the tolling scenario, the toll could reduce taxi and FHV revenues due to a reduction in taxi/FHV VMT with passengers within the CBD. While this could adversely affect individual drivers (see "Environmental Justice"), the industry would remain viable overall.	28-county study area	Net change in daily taxi/FHV VMT regionwide	-126,993 (-2.9%)	-14,028 (-0.3%)	-73,413 (-1.7%)	-217,477 (-5.0%)	-116,065 (-2.7%)	-4,888 (-1.0%)	-137,815 (-3.2%)	No	**No mitigation needed.** No adverse effects (see "Environmental Justice" for mitigation related to effects on taxi and FHV drivers).	-30,963 (-0.7%)	No	**No mitigation needed.** No adverse effects
				Net change in daily taxi/FHV VMT in the CBD	-21,498 (-6.6%)	+15,020 (+4.6%)	-11,371 (-3.5%)	-54,476 (-16.8%)	-25,621 (-7.9%)	+4,962 (+1.5%)	-27,757 (-8.6%)			-904 (-0.3%)		
	Local Economic Effects	Changes in parking demand near the 60th Street CBD boundary	Area near 60th Street Manhattan CBD boundary	Narrative	Changes in parking demand near the 60th Street Manhattan CBD boundary (including increases just north of 60th Street and decreases just to the south) could jeopardize the viability of one or more parking facilities in the area south of 60th Street but would not create a climate of disinvestment that could lead to adverse effects on neighborhood character.							No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects

Table 1.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
7 – Parks and Recreational Resources		New tolling infrastructure, tolling system equipment, and signage in the southern portion of Central Park	Manhattan CBD	Narrative	The Project would replace four existing streetlight poles at three detection locations in Central Park near 59th Street and on two adjacent sidewalks outside the park's wall. These poles would be in the same locations as existing poles and would not reduce the amount of park space or affect the features and activities of the park. The Project would also place tolling infrastructure beneath the structure of the High Line, outside the park area atop the High Line structure. Following consideration of public input received during the public comment period, FHWA concluded the CBD Tolling Alternative would not affect the activities, features, and attributes that qualify the High Line for protection under Section 4(f), and the CBD Tolling Alternative would have a *de minimis* impact on Central Park.							No	**No mitigation needed.** Refer to **Chapter 7, "Parks and Recreational Resources,"** for a listing of measures to avoid adverse effects to parks.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	**No mitigation needed.** The Project Sponsors will implement measures described in the Final EA.
8 – Historic and Cultural Resources		New tolling infrastructure and tolling system equipment on or near historic properties	45 historic properties within the Project's Area of Potential Effects (APE)	Narrative	Based on a review of the Project in accordance with Section 106 of the National Historic Preservation Act, FHWA has determined that the Project would have No Adverse Effect on historic properties and the State Historic Preservation Office has concurred.							No	**No mitigation needed.** Refer to **Chapter 8, "Historic and Cultural Resources,"** for a listing of measures to avoid adverse effects to historic properties.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	**No mitigation needed.** The Project Sponsors will implement the measures described in the Final EA.
9 – Visual Resources		Changes in visual environment resulting from new tolling infrastructure and tolling system equipment	Area of visual effect	Narrative	Infrastructure and equipment would be similar in form to streetlight poles, sign poles, or similar structures already in use throughout New York City. Cameras included in the array of tolling system equipment would use infrared illumination at night to allow images of license plates to be collected without any need for visible light. The Project would have a neutral effect on viewer groups and no adverse effect on visual resources							No	**No mitigation needed.** No adverse effects	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	**No mitigation needed.** No adverse effects.

Table 1.1 - Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
10 – Air Quality	Increases or decreases in emissions related to truck traffic diversions	Cross Bronx Expressway at Macombs Road, Bronx, NY	Increase or decrease in Annual Average Daily Traffic (AADT)	3,901	3,996	2,056	1,766	3,757	2,188	3,255	No	**No mitigation needed.** No adverse effects **Enhancements** **1.** Refer to the overall enhancement on monitoring at the end of this table. **2.** TBTA will work with NYC DOHMH to expand the existing network of sensors to monitor priority locations and supplement a smaller number of real-time $PM_{2.5}$ monitors to provide insight into time-of-day patterns to determine whether the changes in air pollution can be attributed to changes in traffic occurring after implementation of the Project. The Project Sponsors will select the additional monitoring locations in consideration of air quality analysis in the EA and input from environmental justice stakeholders. NYS Department of Environmental Conservation (NYSDEC) and other agencies conducting monitoring will also be consulted prior to finalizing the monitoring approach. The Project Sponsors will monitor air quality prior to implementation (setting a baseline), and two years following implementation. Following the initial two-year post-implementation analysis period, and separate from ongoing air quality monitoring and reporting, the Project Sponsors will assess the magnitude and variability of changes in air quality to determine whether more monitoring sites are necessary. Data collected throughout the monitoring program will be made available publicly as data becomes available and analysis is completed. Data from the real-time monitors will be available online continuously from the start of pre-implementation monitoring. **3.** MTA is currently transitioning its fleet to zero-emission buses, which will reduce air pollutants and improve air quality near bus depots and along bus routes. MTA is committed to prioritizing traditionally underserved communities and those impacted by poor air quality and climate change and has developed an approach that actively incorporates these priorities in the deployment phasing process of the transition. Based on feedback received during the outreach conducted for the Project and concerns raised by members of environmental justice communities, TBTA coordinated with MTA NYCT, which is committed to prioritizing the Kingsbridge Depot and Gun Hill Depot, both located in and serving primarily environmental justice communities in Upper Manhattan and the Bronx, when electric buses are received in MTA's next major procurement of battery electric buses, which began in late 2022. This independent effort by MTA NYCT is anticipated to provide air quality benefits to the environmental justice communities in the Bronx.	3,917	No	**No mitigation needed.** The Project Sponsors are maintaining their commitment to implement the enhancement measures identified in the Final EA and FONSI.
			Increase or decrease in daily number of trucks	509	704	170	510	378	536	50			433		
			Potential adverse air quality effects from truck diversions	No	No	No	No	No	No	No			No		
		I-95, Bergen County, NJ	Increase or decrease in AADT	9,843	11,459	7,980	5,003	7,078	5,842	12,506	No		10,341	No	
			Increase or decrease in daily number of trucks	801	955	729	631	696	637	-236			499		
			Potential adverse air quality effects from truck diversions	No	No	No	No	No	No	No			No		
		RFK Bridge, NY	Increase or decrease in AADT	18,742	19,440	19,860	19,932	20,465	20,391	21,006	No		20,273	No	
			Increase or decrease in daily number of trucks	2,257	2,423	2,820	3,479	4,116	3,045	432			2,433		
			Potential adverse air quality effects from truck diversions	No	No	No	No	No	No	No			No		

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Table 1.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
11 – Energy		Reductions in regional energy consumption	12-county study area	Narrative	Reductions in regional VMT would reduce energy consumption							No	**No mitigation needed.** Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects
12 – Noise		Imperceptible increases or decreases in noise levels resulting from changes in traffic volumes	Bridge and tunnel crossings	Narrative	The maximum noise level increases (2.9 dB(A)), which were predicted adjacent to the Queens-Midtown Tunnel in Tolling Scenario D, would not be perceptible.							No	**No mitigation needed**. No adverse effects **Enhancement** Refer to the overall enhancement on monitoring at the end of this table.	The maximum predicted noise level increase (0.5 dB(A)) at RFK Bridge in Manhattan, would not be perceptible.	No	**No mitigation needed**. No adverse effects. The Project Sponsors are maintaining their commitment to implement the enhancement measures identified in the Final EA and FONSI.
			Local streets	Narrative	Tolling Scenario C was used to assess noise level changes in Downtown Brooklyn, Tolling Scenario D was used at all other locations assessed. The maximum predicted noise level increases (2.5 dB(A)), which were at Trinity Place and Edgar Street, would not be perceptible. There was no predicted increase in noise levels in the Downtown Brooklyn locations.							No		The maximum predicted noise level increases (2.8 dB(A)), at W. 179th St / Broadway, would not be perceptible.	No	

Table 1.1. Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
13 – Natural Resources		Construction activities to install tolling infrastructure near natural resources	Sites of tolling infrastructure and tolling system equipment	Narrative	No effects on surface waters, wetlands, or floodplains. Potential effects on stormwater and ecological resources will be managed through construction commitments. The Project is consistent with coastal zone policies.							No	Refer to **Chapter 13, "Natural Resources,"** for a listing of construction commitments to avoid, minimize, or mitigate potential negative effects.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	The Project Sponsors will implement the construction commitments described in the Final EA.
14 – Hazardous Waste		Potential for disturbance of existing contaminated or hazardous materials during construction	Sites of tolling infrastructure and tolling system equipment	Narrative	Soil disturbance during construction and the potential alteration, removal, or disturbance of existing roadway infrastructure and utilities that could contain asbestos-containing materials, lead-based paint, or other hazardous substances. Potential effects will be managed through construction commitments.							No	Refer to **Chapter 14, "Asbestos-Containing Materials, Lead-Based Paint, Hazardous Wastes, and Contaminated Materials,"** for a listing of construction commitments to avoid, minimize, or mitigate potential negative effects.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	The Project Sponsors will implement the construction commitments described in the Final EA.
15 – Construction Effects		Potential disruption related to construction for installation of tolling infrastructure	Sites of tolling infrastructure and tolling system equipment	Narrative	Temporary disruptions to traffic and pedestrian patterns, and noise from construction activities, with a duration of less than one year overall, and approximately two weeks at any given location. These effects will be managed through construction commitments.							No	Refer to **Chapter 15, "Construction Effects,"** for a listing of construction commitments to avoid, minimize, or mitigate potential negative effects.	Same as Final EA. No change proposed to construction for new tolling infrastructure, tolling system equipment, or signage.	No	The Project Sponsors will implement the construction commitments described in the Final EA.

Table 1.1. Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
17 – Environmental Justice	Low-income drivers	The EA as published in August 2022 found the increased cost to drivers with the new CBD toll would disproportionately affect low-income drivers to the Manhattan CBD who do not have a reasonable alternative for reaching the Manhattan CBD. With further analysis of the population affected and the addition of new mitigation, the Final EA concludes there would not be a disproportionately high and adverse effect on low-income drivers.	28-county study area	Narrative	The increased cost to drivers would occur under all tolling scenarios.							Yes	**Mitigation needed.** The Project will include a tax credit for CBD tolls paid by residents of the Manhattan CBD whose New York adjusted gross income for the taxable year is less than $60,000. TBTA will coordinate with the New York State Department of Taxation and Finance (NYS DTF) to ensure availability of documentation needed for drivers eligible for the NYS tax credit. TBTA will post information related to the tax credit on the Project website, with a link to the appropriate location on the NYS DTF website to guide eligible drivers to information on claiming the credit. TBTA will eliminate the $10 refundable deposit currently required for E-ZPass customers who do not have a credit card linked to their account, and which is sometimes a barrier to access. TBTA will provide enhanced promotion of existing E-ZPass payment and plan options, including the ability for drivers to pay per trip (rather than a pre-loaded balance), refill their accounts with cash at participating retail locations, and discount plans already in place, about which they may not be aware. TBTA will coordinate with MTA to provide outreach and education on eligibility for existing discounted transit fare products and programs, including those for individuals 65 years of age and older, those with disabilities, and those with low incomes, about which many may not be aware. The Project Sponsors commit to establishing an Environmental Justice Community Group that will meet on a quarterly basis, with the first meeting taking place prior to Project implementation, to share updated data and analysis and hear about potential concerns. As it relates to environmental justice, the Project Sponsors will continue providing meaningful opportunities for participation and engagement by sharing updated data and analysis, listening to concerns, and seeking feedback on the toll setting process. TBTA will ensure the overnight toll for trucks and other vehicles is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m. in the final CBD toll structure; this will benefit low-income drivers who travel during that time. For five years, TBTA commits to a Low-Income Discount Plan for low-income frequent drivers who will benefit from a 25 percent discount on the full CBD E-ZPass toll rate for the applicable time of day after the first 10 trips in each calendar month (not including the overnight period, which will already be deeply discounted). **Enhancement** TBTA will coordinate with MTA NYCT to improve bus service in areas identified in the EA as the Brooklyn and Manhattan Bus Network Redesigns move forward.	Incorporating the identified mitigation, no disproportionately high and adverse effect would occur on low-income drivers.	No (with identified mitigation)	No change in identified mitigation needed. The adopted toll structure incorporates and expands the mitigation commitments of the Final EA and FONSI. The adopted toll structure includes an overnight toll for trucks and other vehicles at 25 percent of the peak toll from 9 p.m. to 5 a.m. on weekdays and 9 p.m. to 9 a.m. on weekends The adopted toll structure commits, for five years to a Low-Income Discount Plan for low-income frequent drivers who will benefit from a 50 percent discount on the full CBD E-ZPass toll rate for the applicable time of day after the first 10 trips in each calendar month (not including the overnight period, which will already be deeply discounted).

Table 1.1. Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
17 – Environmental Justice	Taxi and FHV drivers	The EA as published in August 2022 found a potential disproportionately high and adverse effect would occur to taxi and FHV drivers in New York City, who largely identify as minority populations, in tolling scenarios that toll their vehicles more than once a day. This would occur in unmodified Tolling Scenarios A, D, and G; for FHV drivers, it would also occur in Tolling Scenarios C and E. The adverse effect would be related to the cost of the new CBD toll and the reduction of VMT for taxis and FHVs, which would result in a decrease in revenues that could lead to losses in employment. With the addition of new mitigation, the Final EA concludes there would not be a disproportionately high and adverse effect on taxi and FHV drivers.	New York City	Narrative	Potential adverse effect would occur in Tolling Scenarios A, D, and G, which would not have caps or exemptions for taxis and FHV drivers.							Yes	**Mitigation needed.** TBTA will ensure that a toll structure with tolls of no more than once per day for taxis or FHVs is included in the final CBD toll structure.	No disproportionately high and adverse effect would occur on New York City taxi and FHV drivers with the adopted toll structure, which includes a per-trip toll on trips to, within, or from the CBD of $1.25 for taxis and $2.50 for FHVs. These per-trip tolls are equivalent to the once per day toll for passenger vehicles included as part of the adopted toll structure.	No	**No mitigation needed.**
				Change in daily taxi/FHV VMT with passengers in the CBD relative to No Action Alternative: Scenarios included in EA	-21,498 (-6.6%)	+15,020 (+4.6%)	-11,371 (-3.5%)	-54,476 (-16.8%)	-25,621 (-7.9%)	+4,962 (+1.5%)	-27,757 (-8.6%)			-904 (-0.3%)		
				Net change in daily taxi/FHV trips to CBD relative to scenarios included in EA: Additional analysis to assess effects of caps or exemptions	Tolls capped at 1x / Day: +2%	—	—	Tolls capped at 1x / Day: +3% Exempt: +50%	—	—	Tolls capped at 1x / Day: +2%			NA		

Table 1.1. Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

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					A	B	C	D	E	F	G					
17 – Environmental Justice (Cont'd)	Increases or decreases in traffic, as a result of traffic diversions, in communities already overburdened by pre-existing air pollution and chronic diseases	Certain environmental justice communities would benefit from decreased traffic; some communities that are already overburdened by pre-existing air pollution and chronic diseases could see an adverse effect as a result of increased traffic.	The specific census tracts that would experience increased or decreased traffic change slightly depending on the tolling scenario. The following communities could have census tracts that merit place-based mitigation: High Bridge–Morrisania, Crotona–Tremont, Hunts Point–Mott Haven, Pelham–Throgs Neck, Northeast Bronx, East Harlem, Randall's Island, Lower East Side/Lower Manhattan, Downtown Brooklyn–Fort Greene, South Williamsburg, Orange, East Orange, Newark, and Fort Lee.	Narrative	Census tracts with pre-existing air pollutant and chronic disease burdens that would benefit from reduced traffic, and those affected by increased traffic would vary somewhat, but the identified communities remain largely the same across tolling scenarios. Under Tolling Scenario G, Fort Lee would not experience increases.							Yes	**Mitigation needed.** **<u>Regional Mitigation</u>** TBTA will ensure the overnight toll for trucks and other vehicles is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m. in the final toll structure; this will reduce truck diversions. NYCDOT will expand the NYC Clean Trucks Program to accelerate the replacement of eligible diesel trucks, which travel on highways in certain environmental justice communities where the Project is projected to increase truck traffic, to lower-emission electric, hybrid, compressed natural gas, and clean diesel vehicles. NYCDOT will expand its off-hours delivery program in locations where the Project is projected to increase truck diversions to reduce daytime truck traffic and increase roadway safety in certain environmental justice communities. **<u>Place-based Mitigation</u>** TBTA will toll vehicles traveling northbound on the FDR Drive that exit at East Houston Street and then turn to immediately travel south on FDR Drive; this will mitigate modeled non-truck traffic increases on the FDR Drive between the Brooklyn Bridge and East Houston Street. NYCDOT will coordinate to replace diesel-burning TRUs at Hunts Point with cleaner vehicles. NYSDOT will coordinate to expand electric truck charging infrastructure. The Project Sponsors will coordinate to install roadside vegetation to improve near-road air quality. The Project Sponsors will renovate parks and greenspaces. The Project Sponsors will install or upgrade air filtration units in schools. The Project Sponsors will coordinate to expand existing asthma case management programs and create new community-based asthma programming through a neighborhood asthma center in the Bronx.	Census tracts with pre-existing air pollutant and chronic disease burdens that would benefit from reduced traffic, and those affected by increased traffic vary somewhat from the Final EA, as anticipated. The communities that merit place-based mitigation remain the same as those identified in the Final EA and allocations of place-based mitigation funds have been made for each as follows: Crotona–Tremont, $22.6m; High Bridge–Morrisania, $9.2m; Hunts Point–Mott Haven, $18.9m; Northeast Bronx, $4.4m; Pelham–Throgs Neck, $16.6m; Downtown–Heights–Slope (Downtown Brooklyn–Fort Greene), $5.7m; Greenpoint (South Williamsburg), $7.4m; East Harlem, $4.4m; Randall's Island, $0.9m; Fort Lee, $1.4m; City of Orange, $0.9m; East Orange, $1.8m; and Newark, $5.7M. (See Note 1.). TBTA's place-based mitigation for Union Square - Lower East Side (Lower East Side) has no associated cost.	Yes	**No additional mitigation needed.** The Project Sponsors will mplement the mitigation commitments of the Final EA and FONSI listed under Mitigation and Enhancements" in this table).

Note:

1 Based on analysis of the adopted toll structure, communities and census tracts where place-based mitigation measures will be implemented have been confirmed – the specific siting of mitigation measures is being determined through analysis of data on needs and feasibility and coordination among the Project Sponsors, the Environmental Justice Community Group (representing the 10-county environmental justice study area), and relevant stakeholders and implementing agencies; see "Benefits and Allocation of Funding for Mitigation Measures," above.

OVERALL PROJECT ENHANCEMENT. The Project Sponsors commit to ongoing monitoring and reporting of potential effects of the Project, including for example, traffic entering the CBD, vehicle-miles traveled in the CBD; transit ridership from providers across the region; bus speeds within the CBD; air quality and emissions trends; parking; and Project revenue. Data will be collected in advance and after implementation of the Project. A formal report on the effects of the Project will be issued one year after implementation and then every two years. In addition, a reporting website will make data, analysis, and visualizations available in open data format to the greatest extent practicable. Updates will be provided on at least a bi-annual basis as data becomes available and analysis is completed. This data will also be used to support an adaptive management approach to monitoring the efficacy of mitigation, and adjustments as warranted.

2 Project Description: Adopted Toll Structure

The toll structure as adopted by the TBTA Board on March 27, 2024 and published in the New York State Register on [DATE TO COME; WEBLINK TO COME], is included in **Figure 2.1** below.

The parameters of the adopted toll structure fall within the range of tolling scenarios evaluated in the Final EA, as illustrated in **Table 2.1** below, which is the re-creation of Final EA Table 2-3, "Tolling Scenarios Evaluated for the CBD Tolling Alternative" (from page 2-31 of the Final EA) with the adopted toll structure added. As shown in the table, the adopted toll structure has a simplified two-time-period structure (i.e., peak and overnight) on weekdays, as opposed to the three-time-period (i.e., peak, off-peak, and overnight) weekday structures studied in the Final EA. As there is no longer an off-peak period on weekdays, the weekday peak and overnight periods are longer than those studied in the Final EA and FONSI. The peak toll rates in the adopted toll structure are within the range of those presented in the Final EA and the overnight rates are lower than both the off-peak and overnight rates presented in the Final EA. Other parameters related to potential exemptions and caps on the number of tolls per day for certain vehicles also fall within the range presented in the Final EA and FONSI.

The adopted toll structure would use the same tolling infrastructure and tolling system equipment described and evaluated in the Final EA. Construction for the Project began in July 2023 and the construction of tolling infrastructure and tolling system equipment is now complete. Power and communications are nearing completion and testing is under way.

The adopted toll structure continues to meet the Project purpose, needs, and objectives. See **Table 2.2**, which is a re-creation of Final EA Table ES-3, "Comparison of Evaluation Results for the No Action and CBD Tolling Alternatives" (from page ES-14 of the Final EA) with the adopted toll structure added.

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Figure 2.1 Adopted Toll Structure

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY CENTRAL BUSINESS DISTRICT (CBD) CHARGES			
a	E-ZPass Customers VEHICLE CLASSIFICATION	CBD ENTRY CHARGE	TUNNEL CROSSING CREDIT
1	Passenger and other vehicles, including sedans, sport utility vehicles, station wagons, hearses, limousines, pickup trucks with factory beds, pickup trucks with caps below the roofline and not extending over the sides, and vans without an extended roof above the windshield		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$15.00	
	Peak period for registered Low-Income Discount Plan participants using an eligible vehicle, 11th trip and trips thereafter in a calendar month (5am-9pm weekdays, 9am-9pm weekends)	$7.50	
	Peak period per-trip credit (maximum daily credit $5.00)		
	If entering the CBD via the Lincoln Tunnel or Holland Tunnel		$5.00
	If entering or exiting the CBD via the Queens-Midtown Tunnel or Hugh L. Carey Tunnel		$2.50
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$3.75	
2	Single-unit trucks, including non-articulated trucks, pickup trucks with modified beds, vans with modified body behind the drivers cab, pickup trucks with caps above the roofline or extending over the sides, and vans with an extended roof above the windshield		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$24.00	
	Peak period per-trip credit		
	If entering the CBD via the Lincoln Tunnel or Holland Tunnel		$12.00
	If entering or exiting the CBD via the Queens-Midtown Tunnel or Hugh L. Carey Tunnel		$6.00
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$6.00	
3	Multi-unit trucks, including articulated trucks where a power unit is carrying one or more trailers		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$36.00	
	Peak period per-trip credit		
	If entering the CBD via the Lincoln Tunnel or Holland Tunnel		$20.00
	If entering or exiting the CBD via the Queens-Midtown Tunnel or Hugh L. Carey Tunnel		$10.00
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$9.00	
4	Buses, including vehicles registered with the DMV and plated as a bus, omnibus, or have other designated official plates		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$24.00	
	Peak period per-trip credit		
	If entering the CBD via the Lincoln Tunnel or Holland Tunnel		$12.00
	If entering or exiting the CBD via the Queens-Midtown Tunnel or Hugh L. Carey Tunnel		$6.00
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$6.00	
	Licensed sightseeing buses		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$36.00	
	Peak period per-trip credit		
	If entering the CBD via the Lincoln Tunnel or Holland Tunnel		$20.00
	If entering or exiting the CBD via the Queens-Midtown Tunnel or Hugh L. Carey Tunnel		$10.00
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$9.00	
5	Motorcycles		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$7.50	
	Peak period per-trip credit (maximum daily credit $2.50)		
	If entering the CBD via the Lincoln Tunnel or Holland Tunnel		$2.50
	If entering or exiting the CBD via the Queens-Midtown Tunnel or Hugh L. Carey Tunnel		$1.25
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$1.75	

E-ZPass CBD entry charges are available subject to terms, conditions, and agreements established by the Authority.

The Authority reserves the right to determine whether any vehicle is of unusual or unconventional design, weight, or construction and therefore not within any of the listed categories. The Authority also reserves the right to determine the CBD charge for any such vehicle of unusual or unconventional design, weight, or construction. Any single unit vehicle identified as belonging to Classes 1, 2, or 5 will be up-classed to the next toll class when towing a trailer or another vehicle.

Daily toll cap of once per day for Class 1 and Class 5 vehicles. Caps for other vehicles are subject to change pursuant to the adaptive management approach to mitigating project effects, as committed to in the Final Environmental Assessment.

CBD entry charges and tunnel credits are subject to a variable percentage increase/decrease of up to 10% for up to one year after implementation pursuant to the adaptive management approach to mitigating project effects, as committed to in the Final Environmental Assessment.

The Low-Income Discount Plan shall continue for five years as committed to in the Final Environmental Assessment.

The Authority reserves the right to charge a 25% higher CBD charge during Gridlock Alert Days. Each year, the NYCDOT identifies Gridlock Alert Days during the UN General Assembly and throughout the holiday season when heavy traffic is expected in Manhattan. On Gridlock Alert Days, consider walking, biking, or taking mass transit for any trips in Manhattan.

Qualifying authorized emergency vehicles and qualifying vehicles transporting persons with disabilities are exempt pursuant to Vehicle and Traffic Law § 1704-a (2).

Qualifying authorized commuter buses and specialized government vehicles, as determined by the Authority, are exempt.

Figure 2.1 Adopted Toll Structure (Cont'd)

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY CENTRAL BUSINESS DISTRICT (CBD) CHARGES			
b	Customers Using Fare Media Other Than E-ZPass VEHICLE CLASSIFICATION	CBD ENTRY CHARGE	PER TRIP CHARGE PLAN* (TO/FROM/WITHIN/ THROUGH CBD)
1	Passenger and other vehicles, including sedans, sport utility vehicles, station wagons, hearses, limousines, pickup trucks with factory beds, pickup trucks with caps below the roofline and not extending over the sides, and vans without an extended roof above the windshield		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$22.50	
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$5.50	
2	Single-unit trucks, including non-articulated trucks, pickup trucks with modified beds, vans with modified body behind the drivers cab, pickup trucks with caps above the roofline or extending over the sides, and vans with an extended roof above the windshield		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$36.00	
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$9.00	
3	Multi-unit trucks, including articulated trucks where a power unit is carrying one or more trailers		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$54.00	
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$13.50	
4	Buses, including vehicles registered with the DMV and plated as a bus, omnibus, or have other designated official plates		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$36.00	
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$9.00	
	Licensed sightseeing buses		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$54.00	
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$13.50	
5	Motorcycles		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$11.25	
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$2.75	
	NYC TLC taxis, green cabs, for-hire vehicles (FHVs)		
	Taxis, green cabs, and FHVs on trips		$1.25
	FHVs on trips dispatched by high-volume for-hire services (HVFHSs)		$2.50

The Authority reserves the right to determine whether any vehicle is of unusual or unconventional design, weight, or construction and therefore not within any of the listed categories. The Authority also reserves the right to determine the CBD charge for any such vehicle of unusual or unconventional design, weight, or construction. Any single unit vehicle identified as belonging to Classes 1, 2, or 5 will be up-classed to the next toll class when towing a trailer or another vehicle.

Daily toll cap of once per day for Class 1 and Class 5 vehicles. Caps for non-passenger vehicles are subject to change pursuant to the adaptive management approach to mitigating project effects, as committed to in the Final Environmental Assessment.

NYC TLC taxi, green cab, and FHV tolls are to be paid by the passenger pursuant to Rules of City of NY Taxi & Limousine Comm (35 RCNY) §§ 58-26 (f), 59A-23 (b), 59D-17 (c).

CBD entry charges and per trip charges are subject to a variable percentage increase/decrease of up to 10% for up to one year after implementation pursuant to the adaptive management approach to mitigating project effects, as committed to in the Final Environmental Assessment.

The Authority reserves the right to charge a 25% higher CBD charge during Gridlock Alert Days. Each year, the NYCDOT identifies Gridlock Alert Days during the UN General Assembly and throughout the holiday season when heavy traffic is expected in Manhattan. On Gridlock Alert Days, consider walking, biking, or taking mass transit for any trips in Manhattan.

Qualifying authorized emergency vehicles and qualifying vehicles transporting persons with disabilities are exempt pursuant to Vehicle and Traffic Law § 1704-a (2).

Qualifying authorized commuter buses and specialized government vehicles, as determined by the Authority, are exempt.

**Subject to full execution of and compliance with plan agreement by FHV bases and taxi technology system providers.*

Table 2.1 - Modified Final EA Table 2-3. Tolling Scenarios Evaluated for the CBD Tolling Alternative – with the Adopted Toll Structure Added

PARAMETER	SCENARIO A Base Plan	SCENARIO B Base Plan with Caps and Exemptions	SCENARIO C Low Crossing Credits for Vehicles Using Tunnels to Access the CBD, with Some Caps and Exemptions	SCENARIO D High Crossing Credits for Vehicles Using Tunnels to Access the CBD	SCENARIO E High Crossing Credits for Vehicles Using Tunnels to Access the CBD, with Some Caps and Exemptions	SCENARIO F High Crossing Credits for Vehicles Using Manhattan Bridges and Tunnels to Access the CBD, with Some Caps and Exemptions	SCENARIO G Base Plan with Same Tolls for All Vehicle Classes	ADOPTED TOLL STRUCTURE
Time Periods[1]								
Peak: Weekdays	6 AM – 8 PM	6 AM – 8 PM	6 AM – 8 PM	6 AM – 8 PM	6 AM – 8 PM	6 AM – 10 AM; 4 PM – 8 PM	6 AM – 8 PM	5 AM – 9 PM[2]
Peak: Weekends	10 AM – 10 PM	10 AM – 10 PM	10 AM – 10 PM	10 AM – 10 PM	10 AM – 10 PM	10 AM – 10 PM	10 AM – 10 PM	9 AM – 9 PM
Off Peak: Weekdays	8 PM – 10 PM	8 PM – 10 PM	8 PM – 10 PM	8 PM – 10 PM	8 PM – 10 PM	10 AM – 4 PM	8 PM – 10 PM	9 PM – 5 AM
Overnight: Weekdays	10 PM – 6 AM	10 PM – 6 AM	10 PM – 6 AM	10 PM – 6 AM	10 PM – 6 AM	8 PM – 6 AM	10 PM – 6 AM	
Overnight: Weekends	10 PM – 10 AM	10 PM – 10 AM	10 PM – 10 AM	10 PM – 10 AM	10 PM – 10 AM	10 PM – 10 AM	10 PM – 10 AM	9 PM – 9 AM
Potential Crossing Credits								
Credit Toward CBD Toll for Tolls Paid at Tunnel Entries	No	No	Yes - Low	Yes - High	Yes - High	Yes - High	No	Yes - Low
Credit Toward CBD Toll for Tolls Paid at Bridges to Manhattan	No	No	No	No	No	Yes - High	No	No
Potential Exemptions and Limits (Caps) on Number of Tolls per Day[4,5]								
Autos, motorcycles, and mercial vans	Once per day	Once per day	Once per day	Once per day	Once per day	Once per day	Once per day	Once per day
Taxis	No cap	Once per day	Exempt	No cap	Exempt	Once per day	No cap	$1.25 per trip toll on trips to, within, or from the CBD (see note 4)
FHVs	No cap	Once per day	Three times per day	No cap	Three times per day	Once per day	No cap	$2.50 per trip toll on trips to, within, or from the CBD (see note 4)
Small and large trucks	No cap	Twice per day	No cap	No cap	No cap	Once per day	No cap	No cap
Buses	No cap	Exempt	No cap	No cap	Transit buses – Exempt No cap on other buses	Exempt	No cap	Certain buses – Exempt (see note 5)

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PARAMETER	SCENARIO A Base Plan	SCENARIO B Base Plan with Caps and Exemptions	SCENARIO C Low Crossing Credits for Vehicles Using Tunnels to Access the CBD, with Some Caps and Exemptions	SCENARIO D High Crossing Credits for Vehicles Using Tunnels to Access the CBD	SCENARIO E High Crossing Credits for Vehicles Using Tunnels to Access the CBD, with Some Caps and Exemptions	SCENARIO F High Crossing Credits for Vehicles Using Manhattan Bridges and Tunnels to Access the CBD, with Some Caps and Exemptions	SCENARIO G Base Plan with Same Tolls for All Vehicle Classes	ADOPTED TOLL STRUCTURE
Approximate Toll Rate Assumed for Autos, Commercial Vans, and Motorcycles[3]								
Peak	$9	$10	$14	$19	$23	$23	$12	$15
Off Peak	$7	$8	$11	$14	$17	$17	$9	$3.75
Overnight	$5	$5	$7	$10	$12	$12	$7	$3.75
Approximate Toll Rate Assumed for Trucks (Small Trucks/Large Trucks)[3]								
Peak	$18 / $28	$20 / $30	$28 / $42	$38 / $57	$46 / $69	$65 / $82	$12 / $12	$24 / $36
Off Peak	$14 / $21	$15 / $23	$21 / $32	$29 / $43	$35 / $52	$49 / $62	$9 / $9	
Overnight	$9 / $14	$10 / $15	$14 / $21	$19 / $29	$23 / $35	$33 / $41	$7 / $7	$6 / $9

Notes:

1 Tolls would be higher during peak periods when traffic is greatest. All tolling scenarios include a higher toll on designated "Gridlock Alert" days, although the modeling conducted for the Project does not reflect this higher toll since it considers typical days rather than days with unusually high traffic levels.

2 The adopted toll structure has a simplified two-time-period structure (i.e., peak and overnight) on weekdays, as opposed to the three-time-period (i.e., peak, off-peak, and overnight) weekday structures studied in the Final EA. As there is no longer an off-peak period on weekdays, the weekday peak and overnight periods are longer than those studied in the Final EA. The transportation modeling conducted for the adopted toll structure accounts for this change in the peak and off-peak periods and thus the model results reflect this change.

3 Toll rates are for vehicles using E-ZPass and are rounded. For all tolling scenarios, different rates would apply for vehicles not using E-ZPass.

4 The per-trip tolls for taxis and FHVs in the adopted toll structure would be equivalent to the auto peak rate of $15 (based on 2023 NYC Taxi and Limousine Commission data for average trips per vehicle per day: for taxis the average number of trips with passengers to/from/within the CBD is 12, and for FHVs it is 6).

5 With the adopted toll structure, qualifying authorized emergency vehicles and qualifying vehicles transporting people with disabilities would be exempt from the toll. Specialized government vehicles would also be exempt. School buses contracted with the NYC Department of Education, commuter vans licensed with the NYC Taxi and Limousine Commission, and buses providing scheduled commuter services open to the public would also be exempt from the toll.

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Table 2.2 - Modified Final EA Table ES-3. Comparison of Evaluation Results for the No Action and CBD Tolling Alternatives – with the Adopted Toll Structure Added

SCREENING CRITERION	NO ACTION ALTERNATIVE	CBD TOLLING (ACTION) ALTERNATIVE FINAL EA SCENARIOS	ADOPTED TOLL STRUCTURE
Purpose and Need: Reduce traffic congestion in the Manhattan CBD in a manner that will generate revenue for future transportation improvements	DOES NOT MEET	MEETS	MEETS
Objective 1: Reduce daily vehicle-miles traveled (VMT) within the Manhattan CBD Criterion: Reduce by 5% (relative to No Action)	DOES NOT MEET	MEETS	MEETS
Daily VMT reduction (2023)	0%	7.1% - 9.2%	8.9%
Objective 2: Reduce the number of vehicles entering the Manhattan CBD daily Criterion: Reduce by 10% (relative to No Action)	DOES NOT MEET	MEETS	MEETS
Daily vehicle reduction (2023)	0%	15.4% - 19.9%	17.3%
Objective 3: Create a funding source for capital improvements and generate sufficient annual net revenues to fund $15 billion for capital projects for MTA's Capital Program	DOES NOT MEET	MEETS[1]	MEETS
Net revenue to support MTA's Capital Program[2]	$0	$1.0 billion - $1.5 billion	$0.9 billion[3]
Objective 4: Establish a tolling program consistent with the purposes underlying the New York State legislation entitled the "MTA Reform and Traffic Mobility Act"	DOES NOT MEET	MEETS	MEETS

Notes:

1 Although Final EA Tolling Scenario B would not meet Objective 3 with the toll rates identified and assessed in the Final EA, additional analysis was conducted to demonstrate that it would meet this objective with a higher toll rate; the resulting VMT reduction and revenue for that modified scenario would fall within the range of the other Final EA scenarios.

2 The net revenue needed to fund $15 billion depends on a number of economic factors, including but not limited to interest rates and term. For the purposes of the Final EA, the modeling assumes the Project should provide at least $1 billion annually in total net revenue, which would be invested or bonded to generate sufficient funds. The net revenue values provided in this table are rounded and based on Project modeling.

3 Following completion of the Final EA, based on current interest rates and expected timing of projects, MTA's Chief Financial Officer has determined that annual net revenues in the range of $0.9 billion should be sufficient to meet the Project's need to fund $15 billion of capital projects for the MTA Capital Program.

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3 Analysis Framework: General Methodology for Reevaluation

To evaluate the adopted toll structure's effects in comparison to those described in the Final EA, the Project Sponsors used the same methodologies as used for the analyses in the Final EA. For each analysis topic, they considered the effects of the adopted toll structure in comparison to the effects for the seven tolling scenarios evaluated in the Final EA. If preliminary evaluation of the adopted toll structure demonstrated that effects would be same as, or less than, those described in the Final EA, more detailed quantified analysis (such as modeling) was not conducted. For any effects where the preliminary evaluation was not conclusive, additional quantified analysis was conducted to further explore the effect.

The following sections of this reevaluation describe the methodologies used for each analysis topic in more detail. Where relevant to the analyses, the reevaluation includes information comparing the Final EA results to results for the adopted toll structure. Those comparisons include tables from the Final EA with the addition of the adopted toll structure, as well as new tables, where appropriate, that were not included in the Final EA. Tables from the Final EA are provided using the same format and color palette as in the Final EA, with the same title as in the Final EA but are modified to indicate the addition of the adopted toll structure as follows:

Table [X.X] - Modified Final EA Table [Number]. Table Title from Final EA – With Adopted Toll Structure Added

PARAMETER FOR COMPARISON	FINAL EA	ADOPTED TOLL STRUCTURE

New tables that were not in the Final EA have new titles and, thus, do not reference the Final EA, use a different color palette and sequential table numbers, as follows:

Table [X.X] - New Title as Appropriate

PARAMETER FOR COMPARISON	FINAL EA	ADOPTED TOLL STRUCTURE

In addition, each section of this reevaluation presents the summary of effects table that was included in the Final EA, but updated to include the adopted toll structure (Table 1.1 in Section 1). In the Final EA, a summary of effects was included in three locations: in Table ES-5 of the "Executive Summary," at the end of each relevant Final EA chapter, and in Table 16-1 of Chapter 16, "Summary of Effects."

4A Transportation – Regional Transportation Effects and Modeling

Subchapter 4A of the Final EA presented the reasonably expected effects of implementing the CBD Tolling Alternative on the regional transportation system, including travel demand and mode choice. This section evaluates the effects of the adopted toll structure on the region's travel characteristics in comparison to the effects presented in the Final EA. Additional information is provide in **Appendix 4A**.

METHODOLOGY

Final EA Methodology

Subchapter 4A of the Final EA described the methodology used for forecasting changes to the regional transportation system in Section 4A.2, "Methodology," with additional supporting information in Final EA Appendix 4A.1. As detailed in the Final EA, the methodology included the following:

- Forecasted changes in travel demand for No Action Alternative and Final EA tolling scenarios using the New York Best Practice Model (BPM).
- Identified reasonably expected effects of implementing the CBD Tolling Alternative on the regional transportation system, including travel demand, mode choice, and traffic diversion.
- Provided for use in the other analyses in the Final EA. As described in the Final EA in Chapter 3, "Environmental Analysis Framework," page 3-5, the Final EA evaluated multiple tolling scenarios within the CBD Tolling Alternative to identify the range of potential effects that could occur from implementing the CBD Tolling Alternative. Quantitative analyses related to traffic patterns (in Final EA Subchapters 4B through 4E as well as the local intersection analyses in Chapters 10, "Air Quality," and 12, "Noise") considered the tolling scenario that would result in the greatest potential negative effects for that particular topic of analysis.

Reevaluation Methodology

- Modeled the adopted toll structure using the same version of the BPM as was used for the Final EA. This allowed comparison of the results for the adopted toll structure to the results presented in each analysis included in the Final EA.
- Provided BPM results for the adopted toll structure for use in the reevaluation of the full range of topics from the Final EA.

ANALYSIS AND FINDINGS

The Final EA presented a summary of the modeling results for the No Action Alternative and Final EA tolling scenarios for the 28-county regional study area, with information for subareas within that study area. Information presented included vehicle-miles traveled (VMT), mode share for journeys to the Manhattan CBD, and number of daily vehicles entering the CBD. This and the more detailed model results were used for the quantified analyses presented in other chapters of the Final EA, including analyses of the CBD Tolling Alternative's effects on traffic, transit, pedestrians, parking, air quality, noise, social conditions, economic conditions, and environmental justice.

For the reevaluation, the BPM was used to calculate the same information for the adopted toll structure as was estimated for the No Action Alternative and tolling scenarios in the Final EA. This information for the adopted toll structure was then used for the quantified analyses of the same topics in the reevaluation. Detailed results are provided in **Appendix 4A**.

Table 4A.1 presents information from the Final EA Table ES-5 summarizing the conclusions related to regional transportation effects and modeling, now modified to include the adopted toll structure.

CONCLUSION

For the reevaluation, the Project Sponsors added the adopted toll structure to the same regional transportation model they used for evaluations in the Final EA, the BPM. The new modeling for the reevaluation produced a full set of results that allowed comparison to the modeling results evaluated in the Final EA. The analysis demonstrates that the adopted toll structure's effects on regional transportation patterns would be within the range of effects of the tolling scenarios studied in the Final EA.

Table 4A.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
4A – Transportation: Regional Transportation Effects and Modeling	Vehicle Volumes	▪ Decreases in daily vehicle trips to Manhattan CBD overall. ▪ Some diversions to different crossings to Manhattan CBD or around the Manhattan CBD altogether, depending on tolling scenario. As traffic, including truck trips, increase on some circumferential highways, simultaneously there is a reduction in traffic on other highway segments to the CBD. ▪ Diversions would increase or decrease traffic volumes at local intersections near the Manhattan CBD crossings. ▪ Overall decrease in vehicle-miles traveled (VMT) in the Manhattan CBD and region overall in all tolling scenarios and some shift from vehicle to transit mode.	Crossing locations to Manhattan CBD	% Increase or decrease in daily vehicles entering the Manhattan CBD relative to No Action Alternative	-15%	-16%	-17%	-19%	-20%	-18%	-17%	No	**No mitigation needed.** Beneficial effects	-17%	No	**No mitigation needed.** Same as Final EA
	Auto Journeys to CBD		Manhattan CBD	% Increase or decrease in worker auto journeys to Manhattan CBD relative to No Action Alternative	-5%	-5%	-7%	-9%	-11%	-10%	-6%	No	**No mitigation needed.** Beneficial effects	-6%	No	**No mitigation needed.** Same as Final EA
				Absolute increase or decrease in daily worker auto trips to Manhattan CBD relative to No Action Alternative	-12,571	-12,883	-17,408	-24,017	-27,471	-24,433	-14,578			-16,447		
	Truck Trips Through CBD		Manhattan CBD	Increase or decrease in daily truck trips through Manhattan CBD (without origin or destination in the CBD) relative to No Action Alternative	-4,645 (-55%)	-4,967 (-59%)	-5,253 (-63%)	-5,687 (-68%)	-6,604 (-79%)	-6,784 (-81%)	-1,734 (-21%)	No	**No mitigation needed.** Beneficial effects	-4,627 (-55%)	No	**No mitigation needed.** Same as Final EA
	Transit Journeys		Manhattan CBD	% Increase or decrease in daily Manhattan CBD-related transit journeys relative to No Action Alternative	+1.2%	+1.2%	+1.7%	+2.2%	+2.5%	+2.1%	+1.5%	No	**No mitigation needed.** No adverse effects	+1.6%	No	**No mitigation needed.** Same as Final EA
	Traffic Results		Manhattan CBD	% Increase or decrease in daily VMT relative to No Action Alternative	-7.8%	-7.6%	-8.0%	-8.7%	-9.2%	-7.1%	-8.4%	No	**No mitigation needed.** Beneficial effects in Manhattan CBD, New York City (non-CBD), north of New York City, and Connecticut; although there would be VMT increases in Long Island and New Jersey, the effects would not be adverse.	-8.9%	No	**No mitigation needed.** Same as Final EA
			NYC (non-CBD)		-0.3%	-0.2%	-0.7%	-0.9%	-1.0%	-0.7%	-0.3%			-0.4%		
			NY north of NYC		-0.2%	-0.2%	-0.4%	-0.6%	-0.8%	-0.5%	-0.3%			-0.4%		
			Long Island		+0.1%	0.0%	-0.1%	-0.2%	-0.2%	0.0%	0.0%			0.0%		
			New Jersey		+0.0%	+0.0%	+0.2%	+0.2%	+0.1%	+0.2%	+0.1%			+0.1%		
			Connecticut		-0.1%	-0.2%	-0.2%	-0.2%	-0.2%	0.0%	-0.2%			-0.3%		

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4B Transportation – Highways and Local Intersections

Subchapter 4B of the Final EA presented the assessment of the CBD Tolling Alternative's potential effect on traffic operations on highways and local intersections. This section evaluates the effects of the adopted toll structure on the same key highway segments. It also examines the potential changes in traffic operations at local intersections resulting from the adopted toll structure. Additional information supporting the analyses conducted for the reevaluation is provided in **Appendix 4B**.

METHODOLOGY

Final EA Methodology

The methodology used to evaluate the effects of the CBD Tolling Alternative on traffic operations is described in Subchapter 4B of the Final EA in two sections: the methodology for the highway analysis is presented beginning on page 4B-18 in Section 4B.4.1, "Methodology," and the methodology for the local intersection analysis is presented beginning on page 4B-82 in Section 4B.6.1, "Methodology." See also the summary of the methodology beginning on page 4B-1 in Subchapter 4B. In summary, the Final EA analysis methodology included the following:

Highways

1. Used BPM output to predict changes in traffic volumes at bridges, tunnels, and highways approaching the CBD and bypassing the CBD.
2. Calibrated model results to account for over- or under-assignment by the BPM relative to observed conditions.
3. Used understanding of likely diversions, BPM results, and community concerns to identify specific highway segments for analysis (see Final EA Appendix 4B.1, pages 4B.1-1 through 4B.1-3).
4. Determined the tolling scenario that would be representative of those with the highest potential to increase traffic along certain alternate routes and at local intersections. The highway assessment considered the effects of the CBD Tolling Alternative using the tolling scenario with the highest potential diverted traffic volumes, Tolling Scenario D.
5. Conducted modeling analysis using Vissim model or Highway Capacity Software (HCS) model.
6. Identified adverse effects based on criteria developed among TBTA and NYSDOT in consultation with NYCDOT (see Final EA Subchapter 4B, Section 4B.4.1, pages 4B-20 and 4B-21).
7. Where potential adverse effects were identified, identified measures to avoid, reduce, or mitigate those effects.

Local Intersections

1. Used BPM output to predict changes in traffic volumes at bridges, tunnels, and highways approaching the CBD and bypassing the CBD.

2. Calibrated model results and assigned traffic to local routes.
3. Identified study areas and local intersections for analysis: 102 intersections in 15 different study areas were evaluated.
4. Determined which Final EA tolling scenario to analyze, based on the scenario with the highest number of intersection locations with a potential increase of 50 or more vehicles. Using this method, Tolling Scenario D was identified as having the most number of intersection locations with a potential increase of 50 or more vehicles. Therefore, all 102 intersections were analyzed for Tolling Scenario D. An additional analysis was performed in the Downtown Brooklyn study area for Tolling Scenario C since that tolling scenario produced a larger number of intersections with an increase of 50 or more vehicles (see Final EA Subchapter 4B, Section 4B.6.3, "Potential Traffic Effects at Intersections," first paragraph on page 4B-95). As described in the Final EA, the analysis of potential effects on traffic intersection operations was based on the tolling scenario that would result in the greatest increase in vehicle volumes at the intersections in the study area. This methodology resulted in identification of the most potential negative effects of the CBD Tolling Alternative.
5. Conducted quantified analysis for the 102 intersections using Synchro model
6. Identified adverse effects based on criteria developed among TBTA and NYSDOT in consultation with NYCDOT (see Final EA Subchapter 4B, Section 4B.6.1, pages 4B-85 and 4B-86).
7. Where potential adverse effects were identified, identified measures to avoid, reduce, or mitigate those effects.

Reevaluation Methodology

Highways

1. The first step in the methodology for reevaluation of highways was the same as in the Final EA.
2. The second step in the methodology for reevaluation of highways was the same as in the Final EA.
3. Determined incremental traffic volumes for the adopted toll structure at the 10 highway segments identified and evaluated in the Final EA.
4. For highway segments where a higher incremental volume would occur under the adopted toll structure, and for all highway segments predicted to have an adverse effect in the Final EA, conducted further evaluation of the effects resulting from adopted toll structure.

Local Intersections

1. The first step in the methodology for reevaluation of intersections was the same as in the Final EA.
2. Calibrated model results and assigned traffic to local routes in the 15 study areas identified in the Final EA
3. Identified intersections with higher increments under the adopted toll structure than in Tolling Scenario C or D, as appropriate, in the Final EA.
4. Conducted quantified analysis using Synchro models of the study areas for which:
    - Any intersection in the study area had a higher incremental volume than described in the Final EA
    - The Final EA predicted a potential adverse effect at one or more intersections.

ANALYSIS AND FINDINGS

Highways

The Final EA identified three highway segments with potential adverse effects. Reevaluation of the adopted toll structure identifies potential adverse effects at the same three highway segments, as discussed below. No additional mitigation is needed beyond the mitigation commitments of the Final EA.

For the reevaluation, seven highway segments screened in for further evaluation based on step 4 of the reevaluation methodology (see **Table 4B.1**). Of these, additional analysis identified potential adverse effects for the same three segments as described in the Final EA: Queens-Midtown Tunnel–Long Island Expressway (I-495), George Washington Bridge/Cross Bronx Expressway, and FDR Drive between East 10th Street and Brooklyn Bridge. **Table 4B.1** below compares the results of the screening analysis conducted in the Final EA to the results with the reevaluation.

As shown in **Table 4B.1**, on the Long Island Expressway (I-495) at the Queens-Midtown Tunnel, the adopted toll structure would result in an adverse effect in the morning peak hour, with a delay of approximately 4 minutes (an increase in traffic volume of approximately 8.5 percent over the No Action Alternative), whereas no adverse effect was predicted for the morning peak hour at this location in the Final EA. At the same location, the adverse effect in the midday peak hour that was predicted in the Final EA, with a delay of approximately 4 minutes and an increase in traffic volume of 15 percent over the No Action Alternative, would no longer occur with the adopted toll structure.

For the other two highway segments—the George Washington Bridge/Cross Bronx Expressway and FDR Drive between East 10th Street and Brooklyn Bridge—the effects would be lessened under the adopted toll structure when compared to the Final EA, as the incremental volumes caused by the adopted toll structure would be less than with the tolling scenario analyzed in the Final EA.

The mitigation presented in the Final EA would remain effective for each of these locations.

No adverse effects would occur at the other four highway segments with the adopted toll structure.

Table 4B.1 - Effects on Highway Segments in Final EA and Adopted Toll Structure

HIGHWAY SEGMENTS FOR ANALYSIS	FINAL EA: POTENTIAL ADVERSE EFFECTS*	ADOPTED TOLL STRUCTURE		
		FURTHER EVALUATION CONDUCTED	POTENTIAL ADVERSE EFFECTS	INTENSITY OF EFFECT
Lincoln Tunnel/NJ Route 495	No	No	No	
Holland Tunnel/I-78/NJ Route 138	No	No	No	
Queens-Midtown Tunnel – LI Expwy (I-495)	**Yes -** Midday	✓	**Yes -** AM	Delay of 4 minutes in the AM, comparable to the 4 minutes of delay in the midday in the Final EA; volume increase of 8.5% in the AM is less than the 15% in the midday in the Final EA
Hugh L. Carey Tunnel – Gowanus Expressway	No	✓	No	
George Washington Bridge/Cross Bronx Expwy	**Yes -** Midday	Qualitative	**Yes** - Midday	Incremental volume for the adopted toll structure (702 vph) is lower than in the Final EA (826 vph)
Verrazzano-Narrows Bridge/Staten Island Expwy	No	No	No	
FDR Drive – Between E. 10th Street and Brooklyn Bridge	**Yes -** PM	Qualitative	**Yes -** PM	Incremental volume for the adopted toll structure (413 vph) is at the lower end of the range predicted in the Final EA across the seven tolling scenarios studied (404 vph – 666 vph)
Bayonne Bridge	No	✓	No	
Robert F. Kennedy Bridge	No	✓	No	
I-95 Eastern Spur	No	✓	No	

* See Table 4B-27 in the Final EA, page 4B-79.

Local Intersections

Based on the methodology for evaluation of local intersections, 14 of the 102 intersections had higher incremental volumes with the adopted toll structure than identified in the Final EA. Those 14 intersections were located in nine study areas. Thus, those nine study areas, with a total of 71 intersections, were reevaluated. In the nine study areas, further analysis demonstrated that only one of these intersections would have a potential adverse effect under the adopted toll structure—at East 125th Street and Second Avenue in the Robert F. Kennedy Bridge Manhattan study area during the PM peak hour, with a delay of 20.4 seconds. At this location, the Final EA identified adverse effects during both the AM and PM peak periods, with a delay of up to 52.2 seconds. The mitigation commitment described in the Final EA would remain effective at this location under the adopted toll structure.

In addition, the Final EA also identified adverse effects at three additional intersections that would no longer occur under the adopted toll structure.

Table 4B.2 compares the results predicted in the Final EA for local intersections to the results for the adopted toll structure. More information, including traffic volumes and detailed level-of-service analysis results, is provided in an appendix. Detailed analysis results are presented in **Appendix 4B**.

Table 4B.3 presents information from the Final EA Table ES-5 summarizing the conclusions related to traffic effects on highways and at local intersections, now modified to include the adopted toll structure.

Table 4B.2 - Effects on Local Intersections Final EA and Adopted Toll Structure

FINAL EA STUDY AREAS	FINAL EA		ADOPTED TOLL STRUCTURE						
	Potential Adverse Effects	Number of Intersections with Adverse Effect	ANALYSIS BASED ON SCREENING THRESHOLD**				Potential Adverse Effects	Number of Intersections with Adverse Effect	Intensity of Potential Effects
			AM	Midday	PM	Late Night			
Bklyn Bridge/Manhattan Br–Downtown Brooklyn	No		✓			✓	No		
Hugh L. Carey Tunnel and Holland Tunnel–Lower Manhattan, Brooklyn Bridge, and Manhattan Bridge (impacts at one intersection)	Midday	1		☒		✓	No		
Hugh L. Carey Tunnel–Red Hook, Brooklyn	No		✓	✓		✓	No		
Holland Tunnel–Jersey City, NJ	No						No		
Lincoln Tunnel–Manhattan	No						No		
Ed Koch Queensboro Bridge–East Side at 60th St–Manhattan	No					✓	No		
West Side at 60th St–Manhattan	No						No		
Queens-Midtown Tunnel/Ed Koch Queensboro Bridge–Long Island City–Queens	No		✓			✓	No		
Queens-Midtown Tunnel–Murray Hill–Manhattan (impacts at two intersections)	**Yes:** Midday, Late Night	2 total: 1 Midday, 1 Late Night		☒		☒	No		
RFK Bridge–Manhattan	**Yes:** AM, PM	1 total (both AM and PM)	☒		☒	✓	**Yes:** PM	1	PM intersection delay increase of 20.4 seconds with the adopted toll structure, less than the 52.2-second delay increase predicted in the Final EA
RFK Bridge–Queens	No						No		
RFK Bridge–Bronx	No						No		
West Side Highway / Route 9A at West 24th St–Manhattan	No						No		
Lower East Side–Manhattan	No		✓	✓	✓	✓	No		
Little Dominican Republic–Manhattan	No		✓	✓	✓	✓	No		

* See Final EA Section 4B.6.3, "Environmental Consequences," and Table 4B-30 on page 4B-95.

** Intersection study areas screening thresholds for re-analysis:

✓ Study area / time period where the adopted toll structure has a higher traffic increment than the Final EA scenario analyzed

☒ Study area / time period where the Final EA identified potential adverse effect

Draft, Privileged and Confidential – for discussion purposes only; data still being assessed.

CONCLUSION

The analysis conducted for the reevaluation considered the effects of the adopted toll structure on traffic conditions on highways and at local intersections using the same methodology as used for the Final EA. With the adopted toll structure, potential adverse effects would occur on the same three highway segments as identified in the Final EA, but the forecasted traffic volumes at those locations under the adopted toll structure would be lower than the volumes evaluated in the Final EA and no new mitigation is required. At local intersections, one intersection would have a potential adverse effect under the adopted toll structure, in comparison to four intersections identified in the Final EA. The effect at the location with the adverse effect would be lessened with the adopted toll structure and the proposed mitigation would remain effective. Therefore, the reevaluation demonstrates that the Final EA remains valid. With the adopted toll structure, no new potential adverse effects would occur and no additional mitigation is needed. The Project Sponsors remain committed to the mitigation described in the Final EA.

Table 4B.3 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

<table>
<tr><th rowspan="2">EA CHAPTER</th><th rowspan="2">TOPIC</th><th rowspan="2">SUMMARY OF EFFECTS</th><th rowspan="2">LOCATION</th><th rowspan="2">DATA SHOWN IN TABLE</th><th colspan="7">FINAL EA TOLLING SCENARIO</th><th rowspan="2">POTENTIAL ADVERSE EFFECT</th><th rowspan="2">MITIGATION AND ENHANCEMENTS</th><th rowspan="2">ADOPTED TOLL STRUCTURE</th><th rowspan="2">POTENTIAL ADVERSE EFFECT</th><th rowspan="2">MITIGATION AND ENHANCEMENTS</th></tr>
<tr><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th></tr>
<tr><td rowspan="4">4B – Transportation: Highways and Local Intersections</td><td rowspan="3">Traffic – Highway Segments</td><td rowspan="3">The introduction of the CBD Tolling Program may produce increased congestion on highway segments approaching on circumferential roadways used to avoid Manhattan CBD tolls, resulting in increased delays and queues in midday and PM peak hours on certain segments in some tolling scenarios:
▪ Westbound Long Island Expressway (I-495) near the Queens-Midtown Tunnel (midday) Approaches to westbound George Washington Bridge on I-95 (midday)
▪ Southbound and northbound FDR Drive between East 10th Street and Brooklyn Bridge (PM)
▪ Other locations will see an associated decrease in congestion particularly on routes approaching the Manhattan CBD</td><td>10 highway segments (AM)</td><td rowspan="3">Highway segments with increased delays and queues in peak hours that would result in adverse effects</td><td colspan="7">0 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D)</td><td rowspan="3">Yes</td><td rowspan="3">Mitigation needed. The Project Sponsors will implement a monitoring plan prior to implementation with post-implementation data collected approximately three months after the start of tolling operations and including thresholds for effects; if the thresholds are reached or crossed, the Project Sponsors will implement Transportation Demand Management (TDM) measures, such as ramp metering, motorist information, signage at all identified highway locations with adverse effects upon implementation of the Project. NYSDOT owns and maintains the relevant segments of the Long Island Expressway and I-95. The relevant segment of the FDR Drive is owned by NYSDOT south of Montgomery Street and NYCDOT north of Montgomery Street. Implementation of TDM measures will be coordinated between the highway owners and the owners of any assets relevant to implementing the TDM.

Post-implementation of TDM measures, the Project Sponsors will monitor effects and, if needed, TBTA will modify the toll rates, crossing credits, exemptions, and/or discounts to reduce adverse effects.</td><td>AM - 1 out of 10 highway corridors (Westbound Long Island Expressway (I-495) near the Queens-Midtown Tunnel)</td><td rowspan="3">Yes</td><td rowspan="3">No additional mitigation needed. The Project Sponsors will implement the mitigation commitments of the Final EA.</td></tr>
<tr><td>10 highway segments (midday)</td><td colspan="7">2 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F</td><td>Midday - 1 out of 10 highway corridors (approaches to westbound George Washington Bridge on I-95)</td></tr>
<tr><td>10 highway segments (PM)</td><td colspan="7">1 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F</td><td>PM - 1 out of 10 highway corridors (Southbound and northbound FDR Drive between East 10th Street and Brooklyn Bridge)</td></tr>
<tr><td>Intersections</td><td>Shifts in traffic patterns, with increases in traffic at some locations and decreases at other locations, would change conditions at some local intersections within and near the Manhattan CBD. Of the 102 intersections analyzed, most intersections would see reductions in delay.

Potential adverse effects on four local intersections in Manhattan:
▪ Trinity Place and Edgar Street (midday)
▪ East 36th Street and Second Avenue (midday)
▪ East 37th Street and Third Avenue (midday)
▪ East 125th Street and Second Avenue (AM, PM)</td><td>4 locations</td><td>Number of locations with potential adverse effects that will be addressed with signal timing adjustments</td><td colspan="7">4 in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F</td><td>Yes</td><td>Mitigation needed. NYCDOT will monitor those intersections where potential adverse effects were identified and implement appropriate signal timing adjustments to mitigate the effect, per NYCDOT's normal practice.

Enhancement
Refer to the overall enhancement on monitoring at the end of this table.</td><td>Potential adverse effects at 1 location:
East 125th Street at Second Avenue (PM)</td><td>Yes</td><td>No additional mitigation needed. The mitigation commitment remains for East 125th Street at Second Avenue; for the other three locations identified in the Final EA, NYCDOT is maintaining the commitment to implement the measures identified in the Final EA as an enhancement.</td></tr>
</table>

OVERALL PROJECT ENHANCEMENT. The Project Sponsors commit to ongoing monitoring and reporting of potential effects of the Project, including for example, traffic entering the CBD, vehicle-miles traveled in the CBD; transit ridership from providers across the region; bus speeds within the CBD; air quality and emissions trends; parking; and Project revenue. Data will be collected in advance and after implementation of the Project. A formal report on the effects of the Project will be issued one year after implementation and then every two years. In addition, a reporting website will make data, analysis, and visualizations available in open data format to the greatest extent practicable. Updates will be provided on at least a bi-annual basis as data becomes available and analysis is completed. This data will also be used to support an adaptive management approach to monitoring the efficacy of mitigation, and adjustments as warranted.

4C Transportation – Transit

Subchapter 4C of the Final EA presented the assessment of the CBD Tolling Alternative on transit operations throughout the 28-county regional study area, including capacity of transit services (line-haul capacity) and effects on operations within individual transit stations. This section evaluates the effects of the adopted toll structure on the transit lines and stations. More detailed results of the analysis conducted for the reevaluation are provided in **Appendix 4C**.

METHODOLOGY

Final EA Methodology

As described in detail in the Final EA Section 4C.2, "Methodology and Assumptions," the Final EA analysis of transit used screening assessments followed by qualitative and/or quantified analyses conducted in coordination with the operating agency for the potentially affected transit service, consistent with evaluation procedures recommended in New York City's *City Environmental Quality Review (CEQR) Technical Manual*.

NYC's CEQR guidelines were used for analysis of New Jersey transit services (NJ TRANSIT, PATH, and suburban buses that enter the Manhattan CBD) because NJ TRANSIT and the Port Authority of New York and New Jersey (PANYNJ) do not have alternative guidelines. In coordination with Metro-North Railroad and Long Island Rail Road, CEQR methodologies were also used to assess commuter rail lines and stations.

Line-Haul

<u>Subways and Commuter Rail</u>

1. Identified transit lines with more than 200 new peak-hour passengers in a single direction at maximum load point for the tolling scenario with the highest incremental transit ridership increase. The scenario with the highest incremental transit ridership increase for each subway and commuter rail line was used for the next steps in the analysis.
2. For transit lines above the 200-passenger screening threshold, evaluated the number of new passengers per train and car in the peak-hour.
3. Potential adverse effects were identified for any transit services where the Project increment would add more than 5 passengers per car and the service would operate above its guideline capacity (no subway or commuter rail lines exceeded this threshold in the Final EA, and there was no potential adverse effect on subways or commuter rail line-haul capacity).

<u>Buses</u>

1. Identified bus routes with more than 50 new passengers per hour, per direction, at maximum load point for the tolling scenario with the highest incremental transit ridership increase. The scenario with the highest incremental transit ridership increase for each bus route cordon grouping was used for the next steps in the analysis.

2. For bus routes above the 50-passenger threshold, evaluated the number of incremental passengers per trip and calculated the volume-to-capacity (v/c) ratio that would result with the new passengers.

3. Potential adverse effects were identified for bus routes where the v/c ratio would be greater than 1.00, indicating that demand would be greater than capacity (no bus routes exceeded this threshold in the Final EA, and there was no potential adverse effects on bus line-haul capacity).

Stations

1. Identified transit stations with more than 200 new passengers in the peak hour for the tolling scenario with the highest incremental transit ridership increase (excluding cross-platform transfers between trains). Because Tolling Scenario E projected the highest transit system ridership, it was selected as the tolling scenario for detailed analysis of stations requiring further analysis (except at one location in Newark, New Jersey—for both PATH and NJ TRANSIT—where Tolling Scenario C was selected for its greater station ridership increase).
2. For transit stations above the 200-passenger screening threshold, conducted qualitative analysis of station, or quantified analysis of effect on station elements (stairs, escalators, passageways, turnstiles, and fare arrays), in coordination with the station operator.

Reevaluation Methodology

Line-Haul

1. Identified incremental passenger increases from the adopted toll structure at maximum load points for subway, commuter rail, and bus lines.
2. Identified lines with higher increment than Final EA tolling scenario analyzed at those locations.
3. Using the same methodology as the Final EA, conducted analysis for lines where both:
   - Increments met CEQR screening threshold for analysis (200 new peak-hour passengers for subways and commuter rail; 50 new passengers per hour, per direction, at maximum load point for buses)
   - Increments were higher than the Final EA

   If the line met the screening threshold for increased passengers, but the increase was less than that where no adverse effects were found after detailed analysis in the Final EA, then no further detailed analysis was necessary.

Stations

1. Identified incremental passenger increases from the adopted toll structure at transit stations.
2. Using the same methodology as in the Final EA, identified transit stations with more than 200 new passengers in the peak hour due to the adopted toll structure (excluding cross-platform transfers between trains).
3. Using the same methodology as the Final EA, conducted analysis for stations where both:
   - Increments met CEQR screening threshold for analysis

- Increments were higher than the Final EA

If the station met the screening threshold for increased passengers, but the increase was less than that where no adverse effects were found after detailed analysis in the Final EA, then no further detailed analysis was necessary.

ANALYSIS AND FINDINGS

BPM results indicate that overall transit ridership projections with the adopted toll structure would be comparable to those assessed in the Final EA. The adopted toll structure would result in slightly lower subway, bus, and commuter rail boardings than analyzed in the Final EA Scenario E (the scenario with highest overall transit boardings), with the exception of boardings on Metro North Railroad, where the increase would not result in an adverse effect as indicated below. **Table 4C.1** provides a comparison of total transit ridership by mode in the AM peak four-hour period for the Final EA tolling scenarios and the adopted toll structure.

Line-Haul

Considering the effect of the adopted toll structure on individual subway and commuter rail lines, the adopted toll structure would result in incremental passenger volumes above the screening threshold on one commuter rail line: the Metro-North Railroad New Haven Line (see **Table 4C.2**). On that route, the adopted toll structure would result in 437 additional peak-hour passengers (over the No Action), in comparison to 212 new passengers evaluated in the Final EA. Overall, the increase on the New Haven Line would be equivalent to 2.6 new passengers per train car, which is lower than the CEQR threshold of five additional passengers per train car. Therefore, the adopted toll structure would not result in adverse effects on line-haul capacity on the New Haven Line.

For bus routes, the 13 New Jersey/West of Hudson bus lines (via Holland Tunnel) would see an overall 1.9 percent increase in passengers at the maximum load point with the adopted toll structure, compared to a range of -1.4 to 1.4 percent change in passengers for the Final EA tolling scenarios. The maximum increase per-direction at the maximum load point on a single line was 8 new riders, which is lower than the CEQR threshold of 50 new riders. Therefore the adopted toll structure would not result in adverse effects on line-haul capacity on any West of Hudson bus lines.

Table 4C.1 - Modified Final EA Table 4C-6. Transit Ridership: No Action Alternative and CBD Tolling Alternative (2023 AM Peak Period) – with the Adopted Toll Structure Added

MODE	NO ACTION ALTERNATIVE	TOLLING SCENARIO A	TOLLING SCENARIO B	TOLLING SCENARIO C	TOLLING SCENARIO D	TOLLING SCENARIO E	TOLLING SCENARIO F	TOLLING SCENARIO G	ADOPTED TOLL STRUCTURE
Subway	**3,138,960**	**3,184,961**	**3,187,374**	**3,192,428**	**3,199,370**	**3,203,052**	**3,199,783**	**3,197,389**	**3,190,362**
New York City Transit	3,005,224	3,050,101	3,052,683	3,056,840	3,063,552	3,066,614	3,063,577	3,061,455	3,054,862
Port Authority Trans-Hudson (PATH)	133,736	134,860	134,691	135,588	135,818	136,438	136,206	135,934	135,500
Commuter and Intercity Rail	**454,520**	**456,755**	**457,863**	**459,632**	**461,634**	**463,108**	**462,013**	**458,867**	**459,622**
Long Island Rail Road	142,651	143,452	143,989	144,244	144,733	145,544	144,560	144,084	144,103
Metro-North Railroad	152,203	153,128	153,437	154,108	154,850	154,296	155,020	153,491	154,348
NJ TRANSIT	159,666	160,175	160,437	161,280	162,051	163,268	162,433	161,292	161,171
Buses	**2,689,564**	**2,718,960**	**2,717,506**	**2,724,787**	**2,724,456**	**2,727,512**	**2,726,657**	**2,718,457**	**2,721,174**
MTA buses	2,037,319	2,063,136	2,062,997	2,068,001	2,067,753	2,069,107	2,068,898	2,062,926	2,064,522
NJ TRANSIT	471,109	474,344	473,456	474,079	474,279	476,321	475,663	474,260	475,149
Other	181,136	181,480	181,053	182,707	182,424	182,084	182,096	181,271	181,503
Other Transit	**58,635**	**60,073**	**60,225**	**60,467**	**60,474**	**60,475**	**60,712**	**60,246**	**60,335**
Ferries	57,548	58,966	59,120	59,358	59,363	59,360	59,598	59,140	59,216
Tramway	1,087	1,107	1,105	1,109	1,111	1,115	1,114	1,106	1,118
TOTAL	**6,341,679**	**6,420,749**	**6,422,968**	**6,437,314**	**6,445,934**	**6,454,147**	**6,449,165**	**6,434,959**	**6,431,493**

Source: WSP, Best Practice Model 2023, 2021 and NYMTC Hub Bound Travel Data Report 2019.

Note: Data total over a 4-hour period, defined as total boardings, which include transfers. (Because this ridership estimate includes transfers, the ridership reported is greater than MTA NYCT MetroCard data that is widely available.) The BPM includes MTA buses, NJ TRANSIT buses, smaller regional bus carriers, and private carriers. (Other smaller carriers and private carriers are included under "Other Buses.") Tramway volumes were calculated using an incremental change factor derived from Queens/Roosevelt Island sector change per each tolling scenario.

al Business District (CBD) Tolling Program Reevaluation

Table 4C.2 - Line-Haul Analysis Summary

MODE – SECTOR/GROUP	TOTAL NUMBER OF LINES	NUMBER OF LINES REQUIRING FURTHER ANALYSIS		NUMBER OF LINES WITH POTENTIAL ADVERSE EFFECT	
		Final EA	Adopted Toll Structure	Final EA	Adopted Toll Structure
Subway					
Manhattan – 60th Street	**11**	**3**	0	0	0
Queens	**8**	**4**	0	0	0
Brooklyn	**15**	**4**	0	0	0
New Jersey (PATH)	**4**	**1**	0	0	0
Commuter Rail					
Manhattan – 60th Street	**3**	**3**	**1**	0	0
Queens	**10**	**1**	0	0	0
New Jersey	**4**	0	0	0	0
Bus					
Manhattan local buses	**16**	0	0	0	0
Bronx express buses	**11**	0	0	0	0
Queens local and express buses (via Ed Koch Queensboro Bridge)	**3**	0	0	0	0
Queens express buses (via Queens-Midtown Tunnel)	**33**	0	0	0	0
Brooklyn local and express buses	**7**	0	0	0	0
Staten Island express routes (via Brooklyn)	**16**	0	0	0	0
Staten Island express routes (via NJ)	**5**	0	0	0	0
NJ/West of Hudson buses (via Holland Tunnel)	**13**	0	0	0	0
NJ/West of Hudson buses (via Lincoln Tunnel)	**104**	0	0	0	0

Stations

In the Final EA, the initial screening evaluation conducted for the Final EA concluded that 26 commuter rail and subway stations were projected to have passenger increases of more than the screening threshold of 200 new peak-hour passengers. The Project Sponsors then consulted with the station operators, which evaluated the potential increases in the context of recent or planned station improvements, station size, and other factors. As a result of that consultation, four station complexes were evaluated qualitatively and found to have no adverse effects due to the Project:

- Grand Central Terminal (subway and commuter rail station)
- Port Authority Bus Terminal (bus and subway station)
- Penn Station New York (commuter rail and subway station)
- Fulton Transit Center (subway station)

The remaining stations were evaluated quantitatively for the Final EA, with analysis of the CBD Tolling Alternative's effects on station elements (stairs and escalators, passageways, and turnstiles / fare arrays).

Draft, Privileged and Confidential – for discussion purposes only; data still being assessed.

In the reevaluation, the initial screening evaluation concluded that with the adopted toll structure, three stations would have passenger increases of more than the screening threshold—i.e., more than 200 new peak-hour passengers and higher than Final EA Tolling Scenario E: Grand Central Terminal, Court Square Station, and Main Street–Flushing Station (see **Table 4C.3**). These were evaluated using the same approach as in the Final EA: qualitative analysis for Grand Central Terminal (for which the Final EA identified no adverse effect) and quantitative analysis for Court Square and Main Street–Flushing Stations (for which the Final EA identified adverse effects). More detailed results of the analysis conducted for the reevaluation are provided in **Appendix 4C**. The results of this analysis were as follows (see also **Tables 4C.3 and 4C.4**):

- **Grand Central Terminal (Metro-North Railroad, No. 4, 5, 6, 7 and S subway lines)**:
  - 3 percent higher passenger volume than Final EA Tolling Scenario E (18 more passengers)
  - Considering planned and under-construction capacity improvements, and the modest change as compared to the Final EA, this increase would result in the same conclusion of no new adverse effects.
- **Main Street-Flushing station (No. 7 subway line):**
  - 10 percent higher passenger volume than Final EA Tolling Scenario E (27 more passengers)
  - The Final EA identified a potential adverse effect at street escalator 456. The Final EA's proposed mitigation of increasing the escalator speed would mitigate the adverse effect. There would also be a potential adverse effect at this station with the adopted toll structure; it would be mitigated by the increase in elevator speed. There are no new adverse effects.
- **Court Square station (No. 7, E/M, and G subway lines):**
  - 2 percent higher passenger volume than Final EA Tolling Scenario E (5 more passengers)
  - The Final EA identified a potential adverse effect at platform stair Flushing P2/P4. The Final EA's proposed mitigation – constructing a new stair from the northern end of the No. 7 platform to the street – would mitigate the potential adverse effect. The effect at this station would also be adverse with the adopted toll structure and would be mitigated by the new stair.. There are no new adverse effects.

At other stations where the Final EA predicted adverse effects, the adopted toll structure would result in lower volumes than evaluated in the Final EA in Tolling Scenario E—the Hoboken PATH Station, Union Square Station, and 42nd Street–Times Square Station.

At Hoboken Terminal, the reevaluation analysis indicated that the adopted toll structure would result in volumes that are 45 to 50 percent of the Final EA Tolling Scenario E increments. This would result in a stair volume of 141 and 152 incremental passengers in the AM and PM peak hours, respectively, and no potential adverse effect. The mitigation measures identified in the Final EA and FONSI will be implemented as an enhancement (as indicated in **Table 4C.5** below).

At the Union Square and Times Square Stations, even with lower increments under the adopted toll structure, as compared to Tolling Scenario E analyzed in the Final EA, adverse effects may still materialize.

These would be adequately addressed by the mitigation measures described in the Final EA and FONSI. No additional mitigation would be required.

Table 4C.5 presents information from the Final EA Table ES-5 summarizing the conclusions related to transit effects, now modified to include the adopted toll structure.

CONCLUSION

For the Final EA, the Project Sponsors conducted an analysis of the Project's effects on transit services, including line-haul and individual transit stations. For the tolling scenario with the largest increase in transit ridership, they conducted screening assessments followed by qualitative and/or quantitative analyses. For the reevaluation, they used the same methodology for the adopted toll structure and compared the results to those presented in the Final EA. The reevaluation analysis demonstrates that the conclusions of the Final EA remain valid. The adopted toll structure would not result in potential new adverse effects and no additional mitigation is needed. The Project Sponsors remain committed to the mitigation described in the Final EA and FONSI.

Table 4C.3 - Modified Final EA Table 4C-26 & Table 4C-27. Transit Stations with More than 200 Projected New Passengers in the AM and PM Peak Hour (2023), Final EA Tolling Scenario E or C – with the Adopted Toll Structure Added

STATION NAME	OPERATOR	LINE	FINAL EA – TOLLING SCENARIO E OR C		ADOPTED TOLL STRUCTURE	
			AM Peak Net Ons/Offs	PM Peak Net Ons/Offs	AM Peak Net Ons/Offs	PM Peak Net Ons/Offs
New York-Penn Station	LIRR/NJ TRANSIT	—	1,380	1,380	680	680
New York-Grand Central Terminal	Metro-North	—	619	619	637	637
Hoboken Terminal	NJ TRANSIT	—	501	501	122	122
Hoboken Terminal (PATH)	PANYNJ	—	316	340	141	141
World Trade Center Station	PANYNJ	—	264	285	157	210
Times Sq-42 St/42 St-Port Authority Bus Terminal	NYCT	Nos. 1, 2, 3, 7, and A, C, E, N, Q, R, S, W	790	851	474	484
Grand Central-42 St	NYCT	Nos. 4, 5, 6, 7, and S	761	820	475	512
14 St-Union Square	NYCT	Nos. 4, 5, 6, and L, N, Q, R, W	585	630	450	485
Fulton St	NYCT	Nos. 2, 3, 4, 5, and A, C, J, Z	495	533	333	358
Lexington Av/59 St	NYCT	Nos. 4, 5, 6, and N, R, W	455	490	373	401
Lexington Av/53 St and 51 St	NYCT	No. 6, and E, M	395	425	285	307
42 St-Bryant Park-5 Av	NYCT	No. 7, and B, D, F, M	342	369	218	235
Broadway-Lafayette St and Bleecker St	NYCT	No. 6, and B, D, F, M	341	368	246	265
Court Square	NYCT	No. 7, and E, G, M	332	354	337	363
59 St-Columbus Circle	NYCT	No. 1, and A, B, C, D	326	351	222	239
Atlantic Av-Barclays Center	NYCT	Nos. 2, 3, 4, 5, and B, Q, D, N, R	313	338	280	301
34 St-Herald Sq	NYCT	B, D, F, M, N, Q, R, W	319	344	205	221
14 St (Sixth Av/Seventh Av)	NYCT	Nos. 1, 2, 3, and F, M, L	268	288	234	252
Flushing-Main St	NYCT	7	261	281	288	310
Broadway Junction	NYCT	Nos. 1, 2, 3, and F, M, L	245	264	222	239
Canal St	NYCT	No. 6, and N, Q, R, W, J	230	247	170	183
168 St-Washington Heights	NYCT	No. 1, and A, C	204	219	162	174

Source: WSP, Best Practice Model.

Note: All stations with free connections have aggregated volumes. Peak-hour incremental change was calculated as an average 28 percent peak-hour to peak-period ratio in the PM for NYCT subways, PATH trains, and buses; 43 percent peak-hour to peak-period ratio for Metro-North and NJ TRANSIT; and 41 percent peak-hour to peak-period ratio for LIRR. Net ons/offs include subway-to-bus, subway-to-subway, and bus-to-subway transfers and is not a direct calculation of Tolling Scenario E minus No Action Alternative incremental trips. Tolling Scenario C was used for analysis at Hoboken Terminal.

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Table 4C.4 - Modified Final EA Table 4C-34. NYCT Station Elements Where Adverse Effects and Accompanying Project Improvements Have Been Identified (CBD Tolling Alternative, 2023 AM Peak Hour) – with Adopted Toll Structure and Mitigation Added

STATION	ELEMENT	NO ACTION ALTERNATIVE			FINAL EA (SCENARIO E)			ADOPTED TOLL STRUCTURE			WITH MITIGATION: FINAL EA (SCENARIO E)		WITH MITIGATION: ADOPTED TOLL STRUCTURE		IDENTIFIED MITIGATION
		AM Peak-Hour Volume	V/C Ratio	Level of Service	AM Peak-Hour Volume	V/C Ratio	Level of Service	AM Peak-Hour Volume	V/C Ratio	Level of Service	V/C Ratio	Level of Service	V/C Ratio	Level of Service	
Flushing – Main Street	**Escalator E456**: Street escalator at north side of Roosevelt Avenue between Main Street and Union Street	2,984	1.18	D	3,040	1.21	D	3,045	1.21	D	1.08	D	1.08	D	Increase escalator speed to 120 feet per minute.
Court Square	**Stair P2/P4:** Stair between paid zone and Manhattan-bound No. 7 train	3,825	1.84	F	3,955	1.90	F	3,947	1.90	F	1.56	E	1.56	E	Construct new stair from the northern end of No. 7 platform to the street.

Note: Highlighted columns show with-mitigation service levels, these were not included in Table 4C-35 in the Final EA

Table 4C.5 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
4C – Transportation: Transit	Transit Systems	The Project would generate a dedicated revenue source for investment in the transit system. Transit ridership would increase by 1 to 2 percent systemwide for travel to and from the Manhattan CBD, because some people would shift to transit rather than driving. Increases in transit ridership would not result in adverse effects on line-haul capacity on any transit routes.	New York City Transit	% Increase or decrease in total AM peak period boardings systemwide	1.5%	1.6%	1.7%	1.9%	2.0%	1.9%	1.8%	No	**No mitigation needed.** No adverse effects	1.7%	No	**No mitigation needed.** No adverse effects
			PATH		0.8%	0.7%	1.4%	1.6%	2.0%	1.8%	1.6%			1.3%		
			Long Island Rail Road		0.6%	0.9%	1.1%	1.5%	2.0%	1.3%	1.0%			1.0%		
			Metro-North Railroad		0.6%	0.8%	1.3%	1.7%	1.4%	1.9%	0.8%			1.4%		
			NJ TRANSIT commuter rail		0.3%	0.5%	1.0%	1.5%	2.3%	1.7%	1.0%			0.9%		
			MTA/NYCT Buses		1.3%	1.3%	1.5%	1.5%	1.6%	1.6%	1.2%			1.3%		
			NJ TRANSIT Bus		0.7%	0.5%	0.6%	0.7%	1.1%	1.0%	0.7%			0.9%		
			Other buses (suburban and private operators)		0.2%	0.0%	0.9%	0.7%	0.5%	0.5%	0.1%			0.2%		
			Ferries (Staten Island Ferry, NYC Ferry, NY Waterway, Seastreak)		2.5%	2.7%	3.1%	3.2%	3.1%	3.6%	2.7%			2.9%		
			Roosevelt Island Tram		1.8%	1.7%	2.0%	2.2%	2.6%	2.5%	1.7%			2.9%		
	Bus System Effects	Decreases in traffic volumes within the Manhattan CBD and near the 60th Street boundary of the Manhattan CBD would reduce the roadway congestion that adversely affects bus operations, facilitating more reliable, faster bus trips.	Manhattan local buses	% Increase or decrease at maximum passenger load point	0.5%	0.5%	0.7%	1.1%	1.2%	0.9%	0.7%	No	**No mitigation needed.** No adverse effects	0.5%	No	**No mitigation needed.** No adverse effects
			Bronx express buses		-1.6%	2.0%	2.2%	-0.5%	2.0%	1.5%	-2.5%			0.6%		
			Queens local and express buses (via Ed Koch Queensboro Bridge)		2.2%	2.0%	2.3%	2.3%	2.5%	2.8%	2.0%			2.2%		
			Queens express buses (via Queens-Midtown Tunnel)		0.3%	0.2%	0.4%	0.8%	1.1%	0.8%	0.6%			0.5%		
			Brooklyn local and express buses		0.8%	1.0%	0.6%	0.7%	0.7%	0.8%	2.6%			0.5%		
			Staten Island express routes (via Brooklyn)		4.0%	4.5%	4.4%	3.8%	3.9%	3.7%	3.5%			3.9%		
			Staten Island express routes (via NJ)		1.0%	1.9%	2.3%	2.8%	1.8%	1.8%	2.4%			1.3%		
			NJ/West of Hudson buses (via Holland Tunnel)		-1.4%	-0.9%	-0.3%	1.4%	-0.9%	-0.6%	-1.4%			1.9%*		
			NJ/West of Hudson buses (via Lincoln Tunnel)		0.4%	0.6%	0.4%	0.6%	1.5%	1.1%	0.6%			0.8%		

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Table 4C.5 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
4C – Transportation: Transit (Cont'd)	Transit Elements	Increased ridership would affect passenger flows with the potential for adverse effects at certain vertical circulation elements (i.e., stairs and escalators) in five transit stations: ▪ Hoboken Terminal, Hoboken, NJ PATH station ▪ Times Sq-42 St/42 St-Port Authority Bus Terminal subway station in the Manhattan CBD (N, Q, R, W, and S; Nos. 1, 2, 3, and 7; and A, C, E lines) ▪ Flushing-Main St subway station, Queens (No. 7 line) ▪ 14th Street-Union Square subway station in the Manhattan CBD (Nos. 4, 5, and 6; and L, N, Q, R, W lines) ▪ Court Square subway station, Queens (No. 7 and E, G, M lines)	Hoboken Terminal–PATH station (NJ) Stair 01/02	Net passenger increases or at stair in the peak hour	45	72	122	164	240	205	139	Yes	**Mitigation needed for Tolling Scenarios E and F.** TBTA will coordinate with NJ TRANSIT and PANYNJ to monitor pedestrian volumes on Stair 01/02 one month prior to commencing tolling operations to establish a baseline, and two months after Project operations begin. If a comparison of Stair 01/02 passenger volumes before and after implementation shows an incremental change that is greater than or equal to 205, then TBTA will coordinate with NJ TRANSIT and PANYNJ to implement improved signage and wayfinding to divert some people from Stair 01/02, and supplemental personnel if needed.	140	No	**No mitigation needed.** TBTA is maintaining its commitment to implement the mitigation measures identified in the Final EA as an enhancement
			42 St-Times Square–subway station (Manhattan) Stair ML6/ML8 connecting mezzanine to uptown 1/2/3 lines subway platform	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	63%	59%	68%	82%	100%	82%	56%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, TBTA will coordinate with MTA NYCT to remove the center handrail and standardize the riser, so that the stair meets code without the hand rail. The threshold will be set to allow for sufficient time to implement the mitigation so that the adverse effect does not occur.	60%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA
			Flushing-Main St subway station (Queens)–Escalator E456 connecting street to mezzanine level	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	116%	91%	108%	116%	100%	133%	72%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, MTA NYCT will increase the speed from 100 feet per minute (fpm) to 120 fpm.	110%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA.
			Union Sq subway station (Manhattan)–Escalator E219 connecting the L subway line platform to the Nos. 4/5/6 line mezzanine	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	63%	82%	87%	102%	100%	95%	61%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, MTA NYCT will increase the escalator speed from 100 fpm to 120 fpm.	77%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA.
			Court Sq subway station (Queens)–Stair P2/P4 to Manhattan-bound No. 7 line	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	98%	90%	102%	104%	100%	117%	97%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, TBTA will coordinate with MTA NYCT to construct a new stair from the northern end of the No. 7 platform to the street. The threshold will be set to allow for sufficient time to implement the mitigation so that the adverse effect does not occur.	102%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA

4D Transportation – Parking

Subchapter 4D of the Final EA presented the assessment of the CBD Tolling Alternative's potential effect on parking conditions, including curbside parking (on-street parking) and parking lots and garages (off-street parking) serving transit stations and transit hubs where potential increases in transit ridership could increase the demand for parking. This section reevaluates those effects for the adopted toll structure.

METHODOLOGY

Final EA Methodology

The methodology used to evaluate the Project's effect on parking conditions is described in the Final EA in Subchapter 4D, Section 4D.2, "Methodology." As detailed there, the methodology included the following:

1. Used BPM output to identify groupings of transit stations and hubs where the CBD Tolling Alternative (any tolling scenario) would result in more than 50 new vehicles in the peak hour.
2. For groupings of transit stations and hubs from Step 1, calculated the average increase per station within the grouping to identify individual stations where the CBD Tolling Alternative would result in more than 50 new vehicles per hour, since that level of new vehicle trips could be large enough to result in a corresponding increase in demand for parking spaces nearby.
3. For stations and hubs from Step 2, conducted detailed analysis to identify effects (this was not needed for any location).
4. For stations and hubs from Step 3, identified mitigation for any potential adverse effects (this was not needed for any location).

Reevaluation Methodology

The same methodology used in the Final EA was followed for the reevaluation. As with the Final EA, the later steps of detailed analysis and identifying mitigation were not needed for any location because no locations were identified where demand would increase by 50 or more vehicles as the result of the adopted tolling structure.

ANALYSIS AND FINDINGS

The analysis in the Final EA concluded that all tolling scenarios would decrease vehicle trips to the Manhattan CBD with a corresponding increase in transit trips. With the adopted toll structure, the number of daily Manhattan CBD-related journeys by transit mode is projected to increase by 1.7 percent, within the range studied in the Final EA (as shown in Table 4A-10 on page 4A-17, increases would range from 1.2 percent to 2.5 percent for the tolling scenarios evaluated). **Table 4D.1** presents the CBD-related transit journeys for the Final EA tolling scenarios in comparison to the adopted toll structure.

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Table 4D.1 - Modified Final EA Table 4A-10. Daily Manhattan CBD-Related Transit Journeys (compared to No Action Alternative) by Tolling Scenario (2023) – With the Adopted Toll Structure Added

NO ACTION	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
1,833,770	1,856,016	1,856,487	1,864,633	1,874,509	1,878,700	1,872,355	1,860,737	1,864,947
Difference	22,246	22,717	30,863	40,739	44,930	38,585	26,967	31,177
Percentage	1.2%	1.2%	1.7%	2.2%	2.5%	2.1%	1.5%	1.7%

The predicted increase in transit trips to the Manhattan CBD would result in an increase in vehicle trips to commuter rail and park-and-ride facilities, with smaller increases at other transit stations. The analysis in the Final EA concluded that the increase in commuters at individual stations or park-and-ride facilities would be distributed throughout the region, and no individual stations would have increases in vehicle trips of 50 or more vehicles in the peak hour for any tolling scenario. Therefore, no adverse effect on parking conditions would occur at locations in the regional study area. While additional parking demand may occur at transit facilities that have no available capacity, this level of increase would not constitute an adverse effect.

BPM results for the adopted toll structure indicate that, as with the Final EA tolling scenarios, the predicted increase in vehicle trips to commuter rail stations, park-and-ride facilities, and other transit stations would be distributed throughout the region and no individual stations would have 50 or more new peak-hour vehicle trips. **Table 4D.2** provides information on the station groupings that would have more than 50 new peak-hour vehicle trips, and the resulting peak-hour trips per station within each grouping. Consequently, the conclusions of the Final EA related to parking at transit facilities outside the Manhattan CBD remain valid.

Table 4D.2 - Groupings of Transit Stations with More than 50 New Peak-Period Vehicle Trips, Final EA and Adopted Toll Structure

STATION GROUPING / STATIONS IN GROUP	FINAL EA (TOLLING SCENARIO E)		ADOPTED TOLL STRUCTURE	
	New Peak Hour Trips per Group	New Peak Hour Trips per Station	New Peak Hour Trips per Group	New Peak Hour Trips per Station
Commuter Rail Stations				
LIRR Massapequa Park–Babylon Group (5 stations)	141	28	—	—
LIRR Carle Place–Hicksville Group (3 stations)	96	32	—	—
LIRR Merrick–Massapequa Park Group (5 stations)	101	20	—	—
NJT Port Jervis Group (8 stations)	147	18	—	—
NJT Northeast Corridor Central Group (5 stations)	108	22	—	—
MNR Upper Hudson/Dutchess Group (3 stations)	82	27	—	—
MNR Inner Harlem Lower Group (5 stations)	125	25	—	—
MNR Inner New Haven Line Group (5 stations)	—	—	75	15
Subway Stations				
Queens Blvd, Queens E/F Line Group (3 stations)	83	28	60	20
Court Sq, Queens 7/E/G/M Line Group (3 stations)	82	27	81	27
Fourth Ave, Brooklyn D/N/R Line Group (6 stations)	83	14	94	16

Note: LIRR = Long Island Rail Road; MNR = Metro-North Railroad, NJT = NJ TRANSIT

The Final EA also noted that the BPM did not predict increases in vehicle traffic in neighborhoods close to, but outside, the Manhattan CBD as might occur if drivers sought parking there to avoid the toll, but that this behavior might occur on a short-lived basis as part of the adjustment process. If parking demand exceeds supply in the areas close to the CBD boundary, this would not result in adverse effects using the City Environmental Quality Review (CEQR) methodology for parking analyses, which does not consider parking shortfalls in those areas to be adverse effects. The same conclusions remain true for the adopted toll structure.

The MTA Reform and Traffic Mobility Act states that the City of New York must monitor the effects of the Project on parking within and around the Manhattan CBD, and a report must be completed 18 months after the Project commences. A parking study is being led by NYCDOT and work collecting pre-implementation baseline data is under way.

Table 4D.3 presents information from the Final EA Table ES-5 summarizing the conclusions related to parking conditions, now modified to include the adopted toll structure

CONCLUSION

The reevaluation used data from the BPM for the adopted toll structure to assess the potential for effects on parking conditions, and compared the results to the effects presented in the Final EA. BPM results for the adopted toll structure indicate that the predicted increase in vehicle trips to commuter rail stations, park-and-ride facilities, and other transit stations would generally be smaller than evaluated in the Final EA, and the demand for parking would also be lower. Consequently, the analysis demonstrates that the effects of the adopted toll structure would be within the range evaluated in the Final EA and the Final EA remains valid. No adverse effects would occur and no mitigation would be required.

Table 4D.3 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
4D – Transportation: Parking	Parking Conditions	All tolling scenarios would result in a reduction in parking demand within the Manhattan CBD of a similar magnitude to the reduction in auto trips into the Manhattan CBD. With a shift from driving to transit, there would be increased parking demand at subway and commuter rail stations and park-and-ride facilities outside the Manhattan CBD.	Manhattan CBD	Narrative	Reduction in parking demand due to reduction in auto trips to CBD							No	**No mitigation needed.** Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects
			Transit Facilities	Narrative	Small changes in parking demand at transit facilities, corresponding to increased commuter rail and subway ridership							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects

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4E Transportation – Pedestrians and Bicycles

Subchapter 4E of the Final EA presented the assessment of the CBD Tolling Alternative's potential effects on pedestrian circulation; bicycle routes and bicycle infrastructure; and vehicular, pedestrian, and bicycle safety. This section reevaluates those topics for the adopted toll structure.

METHODOLOGY

Final EA Methodology

Subchapter 4E presented the methodologies used for analyses in Section 4E.2.1 (methodology for pedestrian circulation analysis), Section 4E.3.1 (for bicycle assessment), and Section 4E.4.1 (for vehicular, pedestrian, and bicycle safety). As described there, those methodologies included the following steps.

Pedestrians

1. Selected for analysis the tolling scenario that would result in the largest number of new transit riders and therefore the largest increase in pedestrian volumes on sidewalks, street corners, and crosswalks outside transit hubs. Tolling Scenario E was used for the analysis of pedestrian conditions.
2. Used BPM output to identify transit stations and hubs where the CBD Tolling Alternative (Tolling Scenario E, the scenario with the largest increase in pedestrian volumes) would result in more than 200 new pedestrians in the peak hour.
3. For stations and hubs from Step2, identified those with external pedestrian elements (sidewalks, crosswalks, or corners) where the CBD Tolling Alternative (any tolling scenario) would result in more than 200 new pedestrians per hour.
4. For stations from Step3, conducted a detailed (quantified) analysis of capacity vs. demand to identify potential effects on pedestrian flow.
5. For any adverse effects identified in Step4, mitigation was developed.

Bicycles

1. Based on mode share data from New York Metropolitan Transportation Council, the analysis assumed that 2 percent of pedestrian trips at transit hubs in Manhattan may be bicycle trips.
2. With that assumption, bicycle demand vs. capacity at transit hubs was qualitatively assessed.

Safety

1. For the stations and hubs where detailed pedestrian analyses were conducted, NYCDOT accident data were reviewed to identify potential for safety issues related to changes in pedestrian volumes with the CBD Tolling Alternative.
2. For the stations where detailed pedestrian analyses were conducted, analysis locations were assessed for compliance with the Americans with Disabilities Act (ADA).

Reevaluation Methodology

Pedestrians

1. Same as in the Final EA; used BPM output to identify transit stations and hubs where the adopted toll structure would result in more than 200 new pedestrians in the peak hour.
2. Same as in the Final EA; for stations and hubs from Step 1, identified those with external pedestrian elements (sidewalks, crosswalks, or corners) where the adopted toll structure would result in more than 200 new pedestrians per hour. For those locations, identified locations where the number of incremental trips with the adopted toll structure is greater than the incremental trips associated with Tolling Scenario E.
3. If a location met the Step 2 threshold for increased pedestrians, but the increase was less than that in Tolling Scenario E, where no adverse effects were found after detailed analysis in the Final EA, then no further detailed analysis was necessary. For other locations that met the Step 2 threshold, conducted a detailed (quantified) analysis of capacity vs. demand to identify potential effects on pedestrian flow.
4. For any adverse effects identified in Step 3, reviewed adequacy of Final EA mitigation (this was not needed for any locations).

Bicycles and Safety

The Project Sponsors used the same methodologies used in the Final EA for the reevaluation.

ANALYSIS AND FINDINGS

Pedestrians

Both the Final EA Tolling Scenario E and the adopted toll structure would increase the total number of peak-hour transit trips throughout the region, but the increase would be lower with the adopted toll structure (1.4 percent overall) than with Final EA Tolling Scenario E (1.8 percent increase overall), as shown in Table 4E.1.

Table 4E.1 - Modified Final EA Table 4A-10. Daily Manhattan CBD-Related Transit Journeys (compared to No Action Alternative) by Tolling Scenario (2023) – With the Adopted Toll Structure Added

NO ACTION	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
1,833,770	1,856,016	1,856,487	1,864,633	1,874,509	1,878,700	1,872,355	1,860,737	1,864,947
Difference	22,246	22,717	30,863	40,739	44,930	38,585	26,967	31,177
Percentage	1.2%	1.2%	1.7%	2.2%	2.5%	2.1%	1.5%	1.7%

The Final EA concluded that at most transit stations throughout the region, the volume of pedestrian trips would be distributed among different station entrances and different locations around the station, and no adverse effects would occur to pedestrian conditions. The analysis identified 16 stations and station hubs where Tolling Scenario E would result in more than 200 new pedestrian trips in the peak hour, and of those,

two station hubs where there would be more than 200 new pedestrian trips at individual pedestrian elements outside the stations. For those two station hubs, a quantified analysis was performed:

- World Trade Center/Fulton Street (in the Manhattan CBD)
- Herald Square/Penn Station (in the Manhattan CBD)

The quantified analysis in the Final EA found that there would be no adverse effects at the World Trade Center/Fulton Street transit hub. The Final EA concluded that a potential adverse effect would occur at three pedestrian elements at the Herald Square/Penn Station transit hub—a sidewalk location and two crosswalks. The Final EA determined that these effects would be mitigated, if appropriate, through standard measures to widen the pedestrian space on sidewalks (by removing obstructions) and crosswalks (by widening the striped area). The Final EA described a monitoring plan with thresholds that would trigger NYCDOT implementing these actions to increase pedestrian space.

Based on updated BPM results for the adopted toll structure, the adopted toll structure would result in 200 new peak-hour pedestrian trips at 10 stations/station hubs (compared to 16 with Tolling Scenario E) and of those, it would result in more than 200 new peak-hour pedestrian trips at individual elements outside the station at one station hub, the Herald Square/Penn Station hub. **Table 4E.2** shows the results of the screening analysis for the Final EA (Tolling Scenario E) and the adopted toll structure.

Table 4E.2 – Modified Final EA Table 4E-1. Transit Station Pedestrian Trip Assessment (2023) – With Adopted Toll Structure Added

TRANSIT STATIONS WITH MORE THAN 200 NEW PEDESTRIANS PER HOUR		INDIVIDUAL PEDESTRIAN ELEMENT WITH MORE THAN 200 NEW PEDESTRIANS PER PEAK HOUR	
FINAL EA SCENARIO E	**ADOPTED TOLL STRUCTURE**	**FINAL EA SCENARIO E**	**ADOPTED TOLL STRUCTURE**
14 Street–Union Square, CBD (Nos. 4/5/6, and L/N/R/Q/W subway lines)	14 Street–Union Square, CBD (Nos. 4/5/6, and L/N/R/Q/W subway lines)	No	No
Herald Square/Penn Station New York, CBD, includes the following: ▪ 34 Street–Herald Square subway station (B/D/F/M/N/Q/R/W subway lines) ▪ 34 Street–Penn Station subway station (Nos. 1/2/3 subway lines) ▪ 34 Street–Penn Station subway station (A/C/E subway lines) ▪ 33rd Street Station (PATH) ▪ New York Pennsylvania Station (Amtrak, LIRR, NJ TRANSIT)	Herald Square/Penn Station New York, CBD, includes the following: ▪ 34 Street–Herald Square subway station (B/D/F/M/N/Q/R/W subway lines) ▪ 34 Street–Penn Station subway station (Nos. 1/2/3 subway lines) ▪ 34 Street–Penn Station subway station (A/C/E subway lines) ▪ 33rd Street Station (PATH) ▪ New York Pennsylvania Station (Amtrak, LIRR, NJ TRANSIT)	**Yes**	**Yes**
42 Street–Bryant Park, CBD (B/D/F/M subway lines and connection to Fifth Avenue [No. 7 subway line])	—	No	—
47-50 Streets–Rockefeller Center, Manhattan CBD (B/D/F/M subway lines)	47-50 Streets–Rockefeller Center, CBD (B/D/F/M subway lines)	No	No
Broadway–Lafayette Street, Manhattan CBD (B/D/F/M and No. 6 subway lines)	—	No	—
Canal Street, CBD (J/N/Q/R/W/Z and No. 6 subway lines)	—	No	—
Canal Street, CBD (A/C/E subway lines)	—	No	—
World Trade Center/Fulton Street, CBD, includes the following: ▪ Fulton Street subway stations (Nos. 2/3/4/5 and A/C/J/Z subway lines) ▪ World Trade Center Station (PATH) ▪ Cortlandt Street Station (R/W subway lines)	World Trade Center/Fulton Street, CBD, includes the following: ▪ Fulton Street subway stations (Nos. 2/3/4/5 and A/C/J/Z subway lines) ▪ World Trade Center Station (PATH) ▪ Cortlandt Street Station (R/W subway lines)	**Yes**	No
Flushing Main Street, Queens, NY (No. 7 subway line)	Flushing Main Street, Queens, NY (No. 7 subway line)	No	No
Atlantic Terminal, Brooklyn, NY, includes the following: ▪ Atlantic Avenue–Barclays Center subway station (Nos. 2/3/4/5 and B/D/N/Q/R/W subway lines) ▪ Atlantic Terminal (LIRR)	—	No	—

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TRANSIT STATIONS WITH MORE THAN 200 NEW PEDESTRIANS PER HOUR		INDIVIDUAL PEDESTRIAN ELEMENT WITH MORE THAN 200 NEW PEDESTRIANS PER PEAK HOUR	
FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE	FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE
Grand Central Terminal, CBD, includes the following: ▪ 42 Street–Grand Central subway station (Nos. 4/5/6/7/S subway lines) ▪ Grand Central Terminal (Metro-North Railroad)	Grand Central Terminal, CBD, includes the following: ▪ 42 Street–Grand Central subway station (Nos. 4/5/6/7 and S subway lines) ▪ Grand Central Terminal (Metro-North Railroad)	No	No
Lexington Avenue/53 Street, Manhattan CBD (E/M subway lines and connection to 51 Street [No. 6 subway line])	Lexington Avenue/53 Street, CBD (E/M subway lines and connection to 51 Street [No. 6 subway line])	No	No
Second Avenue, CBD (F subway line)	—	No	—
Wall Street, CBD (Nos. 2/3 subway lines)	—	No	—
Secaucus, Hudson County, NJ (NJ TRANSIT)	Secaucus, Hudson County, NJ (NJ TRANSIT)	No	No
Hoboken Terminal, Hudson County, NJ (PATH/NJ TRANSIT)	Hoboken Terminal, Hudson County, NJ (PATH/NJ TRANSIT)	No	
—	Jackson Heights-Roosevelt Avenue, Queens, NY (E/F/M/R/No. 7 subway lines)	No	

Source: WSP, Best Practice Model.

With the adopted toll structure, at the transit hub where incremental peak-hour pedestrian volumes would exceed the screening threshold of 200 trips per hour, three pedestrian elements would exceed the 200-trip-per-hour threshold and therefore warranted additional analysis (see **Table 4E.3**). These were elements that also exceeded the screening threshold with Final EA Tolling Scenario E, but they were not the elements where the Final EA identified adverse effects. At these locations, where the adopted toll structure would result in more than 200 new pedestrians in the peak hour, incremental pedestrian volumes resulting from the adopted toll structure would be smaller than the incremental pedestrian volumes from Tolling Scenario E. Since the Final EA did not find adverse effects at these locations from Tolling Scenario E, adverse effects also would not occur from the adopted toll structure.

The adopted toll structure would not result in more than 200 new pedestrians in the peak hour at the locations where the Final EA identified adverse effects, and therefore the adverse effect would no longer occur there with the adopted toll structure. While mitigation at Herald Square is no longer needed with the adopted toll structure, the Project Sponsors will implement the mitigation described in the Final EA and FONSI as an enhancement.

Table 4E.4 summarizes the pedestrian effects of the adopted toll structure in comparison to the effects identified in the Final EA.

Table 4E.3 – Modified Final EA Table 4E.2-14 (from Appendix 4E). Pedestrian Level 2 Screening Analysis Results – Herald Square/Penn Station Study Area (2023) – With Adopted Toll Structure and Addition of Impact Results

	FINAL EA (SCENARIO E)					ADOPTED TOLL STRUCTURE				
	INCREMENTAL PEDESTRIAN TRIPS					INCREMENTAL PEDESTRIAN TRIPS				
PEDESTRIAN ELEMENTS	AM	Midday	PM	ANALYSIS LOCATION	ADVERSE EFFECT	AM	Midday	PM	ANALYSIS LOCATION	ADVERSE EFFECT
Eighth Ave and 34th St										
North sidewalk along 34th St between Seventh Ave and Eighth Ave	319	64	193	✓	No	163	32	102		No
South sidewalk along 34th St between Seventh Ave and Eighth Ave	62	30	173		No	*	*	*		No
West sidewalk along Eighth Ave between 34th St and 35th St	**221**	53	**204**	✓	**Yes: AM, PM**	114	27	104		No
Northeast corner	319	65	193	✓	No	163	33	102		No
Southeast corner	62	30	173		No	*	*	*		
Southwest corner	64	44	284	✓	No	37	22	141		No
Northwest corner	261	63	242	✓	No	135	32	125		No
North crosswalk	259	49	131	✓	No	132	25	70		No
South crosswalk	62	30	173		No	*	*	*		No
Eighth Ave and 31st St										
West sidewalk along Eighth Ave between 31st St and 32nd St	192	46	179		No	*	*	*		No
Southwest corner	172	42	159		No	*	*	*		No
Northwest corner	200	48	188		No	103	25	98		No
West crosswalk	160	38	146		No	*	*	*		No
Seventh Ave and 34th St										
East sidewalk along Seventh Ave between 34th St and 35th St	59	21	105		No	*	*	*		No
North sidewalk along 34th St between Seventh Ave and Broadway	500	128	532	✓	No	258	67	275	✓	No
Northeast corner	131	35	143		No	*	*	*		No
Northwest corner	104	22	71		No	*	*	*		No
Seventh Ave and 32nd St										
North sidewalk along 32nd St between Sixth Ave and Seventh Ave	399	82	262	✓	No	201	42	137	✓	No
West sidewalk along Seventh Ave between 31st St and 32nd St	34	22	144		No	*	*	*		No
Northeast corner	252	40	70	✓	No	127	20	38		No
North crosswalk	**221**	36	69	✓	**Yes: AM**	111	18	37		No

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PEDESTRIAN ELEMENTS	FINAL EA (SCENARIO E)					ADOPTED TOLL STRUCTURE				
	INCREMENTAL PEDESTRIAN TRIPS			ANALYSIS LOCATION	ADVERSE EFFECT	INCREMENTAL PEDESTRIAN TRIPS			ANALYSIS LOCATION	ADVERSE EFFECT
	AM	Midday	PM			AM	Midday	PM		
Broadway and 34th St										
North sidewalk along 34th St between Seventh Ave and Broadway	460	121	518	✓	No	238	64	269	✓	No
Sixth Avenue and 34th Street										
East sidewalk along Sixth Ave between 34th St and 35th St	131	31	118		No	*	*	*		No
North sidewalk along 34th St between Fifth Ave and Sixth Ave	241	57	220	✓	No	125	29	113		No
South sidewalk along 34th St between Fifth Ave and Sixth Ave	100	18	43		No	*	*	*		No
Northeast corner	313	72	268	✓	No	162	37	137		No
North crosswalk	**265**	65	**259**	✓	**Yes: AM, PM**	136	33	132		No

Notes: ✓ denotes pedestrian elements selected for detailed analysis (AM/PM only).
* Pedestrian elements with fewer than 100 project-generated pedestrian trips in a peak hour are not presented in this table.

Table 4E.4 - Comparison of Pedestrian Effects, Final EA and Adopted Toll Structure

ANALYSIS STEP	FINAL EA (SCENARIO E)	ADOPTED TOLL STRUCTURE
1. Transit stations / hubs with more than 200 new pedestrians in the peak hour	**16 stations/hubs**	**10 stations/hubs**
2. Transit stations / hubs with individual pedestrian elements that have more than 200 new pedestrians in the peak hour	**2 stations/hubs** Herald Square/Penn Station 14 elements would exceed: 6 sidewalks 5 corner reservoirs 3 crosswalks World Trade Center/Fulton St 2 elements would exceed: 1 sidewalk 1 corner reservoir	**1 station/hub** Herald Square/Penn Station 3 elements would exceed: 3 sidewalks
3. For intersections identified in Step 2, detailed level-of-service analysis to identify adverse effects (if needed after comparison to Tolling Scenario E)	**Adverse effects at 1 station/hub** Herald Square/Penn Station Of the 14 elements analyzed, 3 potential adverse effects: 1 sidewalk 2 crosswalks	**No adverse effects** The 3 elements that had potential adverse effects under Tolling Scenario E were not flagged in Step 2 for the adopted toll structure. For the adopted toll structure, the increase in pedestrians at each element that were flagged in Step 2 was less than the increment for Tolling Scenario E, and no adverse effects were found for Tolling Scenario E at those locations.
4. For adverse effects, identification of mitigation measures	**Mitigation needed** – monitoring plan resolved adverse effects at Herald Square/Penn Station	No mitigation needed

Bicycles

The Final EA concluded that the CBD Tolling Alternative would result in small increases in bicycle trips near transit hubs where the highest increases in pedestrian trip share would occur, and some shifts from automobiles to bicycles. No adverse effects on bicycle conditions would occur. With the adopted toll structure, pedestrian volumes, and hence estimated bicycle volumes, would be lower than predicted in the Final EA, and the conclusions of the Final EA remain valid.

Safety

The Final EA found that the CBD Tolling Alternative would result in reduced vehicle volumes in the Manhattan CBD, which would result in an overall benefit to safety. No substantial increases in pedestrian volumes or safety concerns at transit stations would occur. None of the curb ramps at locations analyzed in detail in the Final EA met ADA compliance when the analysis was prepared, but NYCDOT has an ongoing Pedestrian Ramp Program dedicated to upgrading and installing pedestrian ramps throughout New York City. With the adopted toll structure, pedestrian volumes would be lower than predicted in the Final EA and the conclusions of the Final EA remain valid.

Table 4E.5 presents information from the Final EA Table ES-5 summarizing the conclusions related to pedestrians and bicycles, now modified to include the adopted toll structure.

CONCLUSION

The analysis conducted for the reevaluation considered the effects of the adopted toll structure on pedestrian and bicycle conditions using the same methodology as used for the Final EA. The analysis concluded that both the Project as evaluated in the Final EA (Tolling Scenario E) and the adopted toll structure would increase the number of peak-hour transit trips throughout the region, which would also result in an increase in pedestrian trips near transit stations, but the increase would be lower with the adopted toll structure (1.4 percent overall) than with Final EA Tolling Scenario E While the Final EA predicted an adverse effect on pedestrian conditions at one sidewalk and two crosswalks near the Herald Square/Penn Station transit hub within the Manhattan CBD, this adverse effect would no longer occur with the adopted toll structure, and mitigation would no longer be required. Incremental pedestrian volumes around the Herald Square/Penn Station transit hub would be approximately 50 percent lower with the adopted toll structure than predicted in the Final EA. In addition, the adopted toll schedule would not result in adverse effects on pedestrian conditions at other locations. Therefore, the conclusions of the Final EA remain valid. Although the mitigation measures described in the Final EA and FONSI would no longer be needed at Herald Square/Penn Station, the Project Sponsors would implement the commitments related to pedestrian conditions described in the Final EA and FONSI as an enhancement.

Table 4E.5 – Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
4E – Transportation: Pedestrians and Bicycles	Pedestrian Circulation	Increased pedestrian activity on sidewalks outside transit hubs because of increased transit use. At all but one location in the Manhattan CBD (Herald Square/Penn Station), the increase in transit riders would not generate enough new pedestrians to adversely affect pedestrian circulation in the station area. Outside the Manhattan CBD, transit usage at individual stations would not increase enough to adversely affect pedestrian conditions on nearby sidewalks, crosswalks, or corners.	Herald Square/Penn Station NY	Sidewalks, corners, and crosswalks with pedestrian volumes above threshold in AM / PM peak periods	Adverse effects on pedestrian circulation at one sidewalk segment and two crosswalks							Yes	**Mitigation needed.** The Project Sponsors will implement a monitoring plan at this location. The plan will include a baseline, specific timing, and a threshold for additional action. If that threshold is reached, NYCDOT will increase pedestrian space on sidewalks and crosswalks via physical widening and/or removing or relocating obstructions.	Pedestrian volumes at key transit stations/hubs would be similar to and those predicted in Final EA. Adverse effects are no longer predicted at Herald Square.	No	**Mitigation is no longer needed.** The Project Sponsors will implement the mitigation commitment described in the Fina EA as an enhancement
	Bicycles	Small increases in bicycle trips near transit hubs and as a travel mode	Manhattan CBD	Narrative	Small increases in bicycle trips near transit hubs with highest increases in pedestrian trip share							No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects
			Outside Manhattan CBD	Narrative	Some shifts from automobile to bicycles							No	**No mitigation needed**. No adverse effects		No	**No mitigation needed**. No adverse effects
	Safety	No adverse effects	Overall	Narrative	No substantial increases in pedestrian volumes or increased safety concerns, including at existing identified high-crash locations. Overall, with fewer vehicular trips entering and exiting the Manhattan CBD, the CBD Tolling Alternative could result in reduced traffic volumes at these locations. This would help to reduce vehicle-vehicle and vehicle-pedestrian conflicts, leading to an overall benefit to safety.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects

5 Social Conditions: Population Characteristics and Community Cohesion (EA Subchapter 5A), Neighborhood Character (EA Subchapter 5B), and Public Policy (EA Subchapter 5C)

Chapter 5 of the Final EA encompassed three subchapters (Subchapters 5A, 5B, and 5C) that together presented an assessment of the potential effects of implementing the CBD Tolling Alternative on social conditions, which included population characteristics and community cohesion (incorporating consideration of community facilities and services, access to employment, and effects on vulnerable social groups), neighborhood character, and public policy. This section revaluates the effects of the adopted toll structure on those conditions.

METHODOLOGY

Final EA Methodology

The Final EA considered the range of issues that together constitute social conditions, consistent with FHWA guidance documents. Information on population characteristics was largely based on the U.S. Census Bureau's 2015–2019 American Community Survey (ACS) 5-Year Estimates. BPM results were used to evaluate the Project's effects on those characteristics. The methodologies used are described in further detail in in the Final EA in Subchapter 5A, "Population Characteristics and Community Cohesion," Section 5A.2, "Methodology" starting on page 5A-1 and Subchapter 5B, "Neighborhood Character," Section 5B.2.1, "Methodology" starting on page 5B-1.

Reevaluation Methodology

The same methodology was used for reevaluation of the adopted toll structure. BPM output for the adopted toll structure was compared to the results evaluated in the Final EA to determine potential changes in conclusions related to social conditions.

ANALYSIS AND FINDINGS

The Final EA concluded that the congestion reductions resulting from the CBD Tolling Alternative would positively affect community connections and access to employment, education, healthcare, and recreation for residents. Based on an analysis of BPM results and other contextual information about the study area, it also concluded the following:

- The predicted changes in travel patterns would not adversely affect community cohesion. Changes to travel patterns, including increased use of transit, as a result of the Project would not adversely affect

community cohesion or make it more difficult for people to connect with others in their community, given the extensive transit network connecting to the Manhattan CBD and the small change in trips predicted.

- The Project would not result in the potential for indirect (involuntary) residential displacement. The Project would not result in the potential for indirect (involuntary) residential displacement. It would not result in substantial changes to market conditions so as to lead to changes in housing prices, given that real estate values in the Manhattan CBD are already high and the many factors that affect each household's decisions about where to live. In addition, low-income residents of the CBD would not experience a notable increase in the cost of living as a result of the Project because of the lack of change in housing costs, the many housing units protected through New York's rent-control, rent-stabilization, and other similar programs, the tax credit available to CBD residents with incomes of up to $60,000, and the conclusion that the cost of goods would not increase as a result of the Project.
- While the Project would increase costs for community service providers that operate vehicles into and out of the Manhattan CBD and for people who travel by vehicle to community facilities and services in the Manhattan CBD or from the CBD, given the wide range of travel options other than driving, the cost for users to drive to community facilities and services would not constitute an adverse effect on community facilities and services.
- The Project would not adversely affect vulnerable social groups, including elderly populations, persons with disabilities, transit-dependent populations, and non-driver populations. The specific costs incurred by each individual would vary depending on their particular circumstances. Many people, and particularly transit-dependent and non-driver populations, would benefit from travel-time and reliability improvements to bus service due to traffic reductions as well as from improvements to transit services.
- Access to employment in the Manhattan CBD would not be adversely affected. Most commuters to the CBD currently use transit. Those who drive despite the CBD toll would do so based on the need or convenience of driving and would benefit from the reduced congestion in the Manhattan CBD. There would be a negligible effect (less than 0.1 percent) on travel to employment within the Manhattan CBD and reverse-commuting from the CBD due to the wide range of transit options available and the small number of commuters who drive today.
- The changes in traffic patterns on local streets would not change the defining elements of the neighborhood character of the Manhattan CBD, which includes a variety of different land use types and neighborhoods. The predicted decrease in traffic volumes would result in beneficial effects to neighborhood character within the CBD.
- The Project would be consistent with regional transportation plans and other public policies.

With the adopted toll structure, automobile toll rates are within the range evaluated in the Final EA (see **Table 5.1**) and the effects on travel patterns (e.g., the change in total daily journeys to the Manhattan CBD and the change in non-work-related journeys such as travel for school, shopping, medical care, or entertainment purposes) would be within the range evaluated in the Final EA (see **Table 5.2**). The adopted toll structure includes a low-income discount plan, consistent with the commitments of the Final EA and FONSI. In addition, the adopted toll structure includes two plans that would enable individuals with

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disabilities and organizations that transport such individuals to apply for an exemption from the CBD toll: an Individual Disability Exemption Plan and an Organization Disability Exemption Plan. Therefore the conclusions of the Final EA remain valid.

*Table 5.1 - Change in Total Daily Journeys (All Modes) To, Within, and From the Manhattan CBD – Final EA and Adopted Toll Structure**

PARAMETER	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
Auto toll rates – peak	$9	$10	$14	$19	$23	$23	$12	$15
Auto toll rates – off-peak	$7	$8	$11	$14	$17	$17	$9	$3.75
Auto toll rates – overnight	$5	$5	$7	$10	$12	$12	$7	
Low-income discount plan	25% discount**							50% discount**
Change in total daily journeys **to, within, and from** the Manhattan CBD	+305 (+0.01%)	+2.993 (+0.10%)	+3,147 (+0.11%)	-1,886 (-0.07%)	-660 (-0.02%)	+1,424 (+0.05%)	+1,141 (+0.04%)	+846 (+0.03%)

* See Final EA Table 5A-3, pg. 5A-23.

** The Final EA committed to a Low-Income Discount Plan with a 25% discount on the peak toll rate after the first 10 trips each month (resulting in a discounted base auto toll rate of $7 - $17). The adopted toll structure has a 50% discount on the peak toll rate after the first 10 trips each month (resulting in a discounted base auto toll rate of $7.50).

*Table 5.2 - Predicted Changes in Non-Work Journeys in Final EA and Adopted Toll Structure (2023)**

PARAMETER	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
Change in non-work-related journeys **to, within, and from** the Manhattan CBD vs. No Action Alternative	-803 (-0.2%)	+2,124 (+0.2%)	+364 (+0.04%)	-3,726 (-0.4%)	-2,660 (-0.3%)	+570 (+0.1%)	-368 (-0.04%)	+836 (+0.1%)

* See Final EA Table 5A-5, pg. 5A-25.

Table 5.3 presents information from the Final EA Table ES-5 summarizing the conclusions related to social conditions, now modified to include the adopted toll structure.

CONCLUSION

To consider the effect of the adopted toll structure on social conditions, the Project Sponsors reviewed the parameters of the toll structure and BPM results for the adopted toll structure in comparison to results evaluated in the Final EA with respect to factors that affect social conditions, such as travel patterns, work-related and non-work-related trips, and changes in traffic patterns that could affect localized neighborhood character. As presented earlier, the toll rates and other parameters fall within the range evaluated in the Final EA. In addition, BPM results for the adopted toll structure for factors affecting social conditions also fall within the range evaluated in the Final EA. Consequently, the conclusions of the Final EA remain valid. No new adverse effects would occur and no new mitigation would be required.

Table 5.3 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO (A, B, C, D, E, F, G)	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
5A – Social Conditions: Population	Benefits	Benefits in and near the Manhattan CBD	28-county study area	Narrative	Benefits in and near the Manhattan CBD related to travel-time savings, improved travel-time reliability, reduced vehicle operating costs, improved safety, reduced air pollutant emissions, and predictable funding source for transit improvements. This would positively affect community connections and access to employment, education, healthcare, and recreation for residents.	No	**No mitigation needed.** Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects
	Community Cohesion	Changes to travel patterns, including increased use of transit, resulting from new toll	28-county study area	Narrative	Changes to travel patterns, including increased use of transit, as a result of the Project would not adversely affect community cohesion or make it more difficult for people to connect with others in their community, given the extensive transit network connecting to the Manhattan CBD and the small change in trips predicted.	No	**No mitigation needed.** No adverse effects (see "Environmental Justice" for mitigation related to increased costs for low-income drivers).	Same as Final EA	No	**No mitigation needed.** Beneficial effects
	Indirect Displacement	No notable changes in socioeconomic conditions or cost of living so as to induce potential involuntary displacement of residents	Manhattan CBD	Narrative	The Project would not result in the potential for indirect (involuntary) residential displacement. It would not result in substantial changes to market conditions so as to lead to changes in housing prices, given that real estate values in the Manhattan CBD are already high and the many factors that affect each household's decisions about where to live. In addition, low-income residents of the CBD would not experience a notable increase in the cost of living as a result of the Project because of the lack of change in housing costs, the many housing units protected through New York's rent-control, rent-stabilization, and other similar programs, the tax credit available to CBD residents with incomes of up to $60,000, and the conclusion that the cost of goods would not increase as a result of the Project (see "Economic Conditions").	No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects
	Community Facilities and Services	Increased cost for community facilities and service providers in the Manhattan CBD, their employees who drive, and clientele who drive from outside the CBD	Manhattan CBD	Narrative	The Project would increase costs for community service providers that operate vehicles into and out of the Manhattan CBD and for people who travel by vehicle to community facilities and services in the Manhattan CBD, as well as residents of the CBD and employees of community facilities who use vehicles to travel to community facilities outside the CBD. Given the wide range of travel options other than driving, the cost for users to drive to community facilities and services would not constitute an adverse effect on community facilities and services.	No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects
	Effects on Vulnerable Social Groups	Benefits to vulnerable social groups from new funding for MTA Capital Program	28-county study area	Narrative	The Project would benefit certain vulnerable social groups, including elderly populations, persons with disabilities, transit-dependent populations, and non-driver populations by creating a funding source for the MTA 2020–2024 Capital Program (and subsequent capital programs and by reducing congestion in the Manhattan CBD). Elderly individuals would benefit from the travel-time and reliability improvements to bus service with the CBD Tolling Alternative, as bus passengers tend to be older than riders on other forms of transit, such as the subway and, as described above, bus passengers in the Manhattan CBD would benefit from travel-time savings due to the decrease in congestion. People over the age of 65 with a qualifying disability receive a reduced fare on MTA subways and buses, and elderly individuals with a qualifying disability can also receive MTA's paratransit service, including taxis and FHVs operating on behalf of MTA to transport paratransit users. Elderly people with disabilities and low-income individuals who drive to the Manhattan CBD would be entitled to the same mitigation and enhancements proposed for low-income and disabled populations, in general. Other elderly individuals who drive to the Manhattan CBD would pay the toll.	No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects
	Access to Employment	Increased cost for small number of people who drive to work	28-county study area	Narrative	Decrease in work trips by driving modes to and within the Manhattan CBD, with an offsetting increase in transit ridership. Those who drive despite the CBD toll would do so based on the need or convenience of driving and would benefit from the reduced congestion in the Manhattan CBD. Negligible effect (less than 0.1%) on travel to employment within the Manhattan CBD and reverse-commuting from the CBD due to the wide range of transit options available and the small number of commuters who drive today.	No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects

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Table 5.3 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
5B – Social Conditions: Neighborhood Character	Neighborhood character	No notable change in neighborhood character	Manhattan CBD	Narrative	The changes in traffic patterns on local streets would not change the defining elements of the neighborhood character of the Manhattan CBD.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
			Area near 60th Street Manhattan CBD boundary	Narrative	Changes in parking demand near the 60th Street CBD boundary (including increases just north of 60th Street and decreases just to the south) would not create a climate of disinvestment that could lead to adverse effects on neighborhood character nor alter the defining elements of the neighborhood character of this area.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
5C – Social Conditions: Public Policy	Public policy	No effect	28-county study area	Narrative	The Project would be consistent with regional transportation plans and other public policies in place for the regional study area and the Manhattan CBD.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects

6 Economic Conditions

Chapter 6 of the Final EA presented an assessment of the potential effects of implementing the CBD Tolling Alternative on economic conditions at both the regional and neighborhood level. This section revaluates the effects of the adopted toll structure on those conditions.

METHODOLOGY

Final EA Methodology

Chapter 6 of the Final EA detailed the methodology used for the assessment on economic conditions in Section 6.2, beginning on page 6-1. As presented there, that included the following:

1. Identified baseline conditions using data from the U.S. Census, U.S. Department of Labor, and other sources with information on economic activities in the CBD and the 28-county regional study area
2. Used BPM output related to the Final EA tolling scenarios to identify potential changes for all tolling scenarios related to:
    - Movement of workforce
    - Non-work-related trips, including tourism
    - Taxi and FHV industry
    - Movement of goods and services and related effects on small businesses
    - Neighborhood-level effects near the 60th Street CBD boundary

Reevaluation Methodology

1. Compared BPM output for the adopted toll structure to the results evaluated in the Final EA to determine potential changes in conclusions related to economic conditions, for the same topics evaluated in the Final EA

ANALYSIS AND FINDINGS

Movement of Workforce

The Final EA concluded that no adverse economic effects would occur to any particular industry or occupational category as a result of the Project. The Manhattan CBD is highly accessible by transit and the majority of people who work in the CBD use transit to travel to work. While certain industries and occupations in the CBD have higher rates of auto commuting, these businesses have a small number of employees overall.

With the adopted toll structure, automobile toll rates are within the range evaluated in the Final EA, and the effects on the workforce would therefore be consistent with the conclusions of the Final EA (see **Table 6.1** below). The adopted toll structure would result in a decrease in the share (percentage) of daily work-related trips made to the CBD; this decrease would fall within the range evaluated in the Final EA for the tolling scenarios, and the conclusions of the Final EA remain valid.

*Table 6.1 - Change in Daily Worker Journeys To, Within, and From the Manhattan CBD – Final EA and Adopted Toll Structure**

PARAMETER	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
Auto toll rates – peak	$9	$10	$14	$19	$23	$23	$12	$15
Auto toll rates – off-peak	$7	$8	$11	$14	$17	$17	$9	$3.75
Auto toll rates – overnight	$5	$5	$7	$10	$12	$12	$7	$3.75
Change in total daily worker journeys by auto **to and within** the Manhattan CBD vs. No Action Alternative	-12,552 (-4.6%)	-11,790 (-4.4%)	-17,271 (-6.4%)	-23,877 (-8.8%)	-27,221 (-10.1%)	-24,230 (-9.0%)	-13,264 (-4.9%)	-17,290 (-6.4%)
Change in total daily worker journeys by auto **from** the Manhattan CBD vs. No Action Alternative	-482 (-3.8%)	-328 (-2.6%)	-661 (-5.3%)	-961 (-7.7%)	-916 (-7.3%)	-621 (-5.0%)	-550 (-4.4%)	-420 (-3.4%)

* See Final EA Table 6-23, pg. 6-51.

Non-Work-Related Trips, Including Tourism

The tourism industry in the CBD is not dependent on travel by autos or taxis/FHVs; most visitors (96 percent) use transit, walking, or tour buses to reach the CBD. The Final EA evaluated the CBD Tolling Alternative's potential effects on non-work-related journeys to and within the Manhattan CBD, including trips made for shopping and tourism. All tolling scenarios would result in small changes in non-work-related journeys to and within CBD from the No Action Alternative.

The Final EA concluded that the tolling scenarios would not adversely affect tourism or other industries related to non-work-related trips. As shown in **Table 6.2**, the adopted toll structure would result in a small increase in non-work-related journeys (across all modes) to and within CBD that falls within the range evaluated in the Final EA, and the conclusions of the Final EA remain valid.

*Table 6.2 - Predicted Changes in Non-Work Journeys (2023), Final EA and Adopted Toll Structure**

PARAMETER	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
Change in Non-Work-Related Journeys To and Within CBD vs. No Action Alternative	-803 (-0.2%)	+2,124 (+0.2%)	+364 (+0.04%)	-3,726 (-0.4%)	-2,660 (-0.3%)	+570 (+0.1%)	-368 (-0.04%)	+836 (+0.1%)

* See Final EA Table 6-28, pg. 6-58

Taxi and FHV Industry

The Final EA assessed the effects of the CBD Tolling Alternative on the taxi and FHV industry. The tolling scenarios evaluated in the Final EA included a variety of tolling policies for taxis and FHVs, ranging from unlimited tolling for taxis each day to a complete exemption from paying the CBD toll. In all tolling scenarios, the base toll price for taxis and FHVs, if any, was the same as for automobiles.

The analysis in the Final EA showed that in all tolling scenarios, the VMT for taxis and FHVs with paying customers (i.e., excluding VMT without paying customers in the vehicle) would decrease regionwide, in New York City, and in Manhattan overall. The reductions would be greatest in New York City, ranging from 5 to 9 percent in tolling scenarios that do not include a cap or exemption for tolls on taxis and FHVs (Tolling Scenarios A, D, and G) and 1 to 5 percent in those that do have caps and/or exemptions (Tolling Scenarios B, C, E, and F). For tolling scenarios with no cap or exemption for tolls on taxis and FHVs, VMT reductions would be largest within the Manhattan CBD, which is the core service area for yellow taxis, as well as in Manhattan overall.

The Final EA concluded that tolling scenarios that would toll taxis and/or FHVs more than once a day would result in VMT reductions at a level that could adversely affect individual drivers (see discussion of environmental justice), but that the industry would remain viable overall. For the Final EA, the Project Sponsors committed to ensure that a toll structure with tolls of no more than once per day for taxis or FHVs is included in the final toll structure to avoid an adverse effect on taxi and FHV drivers from the Project.

The Final EA described that in terms of economic impacts on businesses and industries, the change in taxi and FHV operations and business practices without the new commitment, while adverse for taxi and FHV drivers, would not have resulted in an adverse economic impact on the industry overall.

With the adopted toll structure, the base toll for taxis would be $1.25 per trip with paying passengers for trips to, within, or from the Manhattan CBD; for FHVs, the base toll would be $2.50 per trip with paying passengers for trips to, within, or from the Manhattan CBD. This is equivalent to the auto peak rate in the adopted toll structure of $15, based on the average number of trips per taxi and per FHV to, from, and within the CBD each day. Thus, this rate is consistent with the Project Sponsors' commitment to incorporate a toll of no more than once per day for taxis and FHVs in the final toll structure, and falls within the range of daily peak toll rates evaluated in the Final EA and determined not to have an adverse effect on either drivers or the industry, which was from $9 to $23 in the different tolling scenarios (see **Table 6.3**).

As shown in **Table 6.4**, the resulting change in VMT for taxis and FHVs with paying passengers would also fall within the range evaluated in the Final EA and determined not to have an adverse effect. In the Final EA, Tolling Scenarios B, F, and Modified G limited tolls on taxis and FHVs to once per day, with peak toll rates for autos ranging from $10 to $23. The toll for taxis and FHVs in those scenarios would apply for trips entering the CBD. Those three tolling scenarios resulted in increases in taxi and FHV VMTs within the Manhattan CBD but decreases citywide and regionwide. The other tolling scenarios (A, C, D, E, and G) did not limit tolls for taxis and FHVs to once per day and resulted in decreases in taxi/FHV VMT within the CBD as well as citywide and throughout the region. The adopted toll structure would have a toll rate falling

between that of Tolling Scenarios Modified G and F, but would apply the charge to trips within or leaving the CBD as well as those entering. For this reason, the adopted toll structure is predicted to result in a very small decrease in VMT within the CBD (0.3 percent), falling between the increases shown in the Final EA for Tolling Scenarios B, F, and Modified G and the larger decreases shown for the other tolling scenarios. Within New York City as a whole (including the CBD), the adopted toll structure would have a lower reduction in passenger VMT (1.6 percent) than Modified Scenario G (1.7 percent). It would therefore better achieve the congestion reduction purpose of the Project with respect to taxis and FHVs within the CBD while maintaining a low reduction in VMT within New York City as a whole, comparable to Modified Tolling Scenario G.

Since the final adopted toll structure is consistent with the Project Sponsors' commitment related to charges for taxis and FHVs and would result in only a small reduction in taxi and FHV VMT within the Manhattan CBD, the conclusions of the Final EA remain valid.

For more information on the effects of the adopted toll structure on taxi and FHV drivers, see the discussion in the reevaluation of environmental justice.

Table 6.3 - Comparison of Toll Policy for Taxis and FHVs, Final EA and Adopted Toll Structure

TOLL POLICY	FINAL EA TOLLING SCENARIOS A	B	C	D	E	F	G	Modified G	ADOPTED TOLL STRUCTURE
Taxi Toll Policy	All Entries	Once per Day	Exempt	All Entries	Exempt	Once per Day	All Entries	Once per Day	$1.25 per trip toll on trips to, within, or from the CBD*
FHV Toll Policy	All Entries	Once per Day	Up to 3 Times Daily	All Entries	Up to 3 Times Daily	Once per Day	All Entries	Once per Day	$2.50 per trip toll on trips to, within, or from the CBD*
Peak Toll Rate	$9	$10	$14	$19	$23	$23	$12	$12	$15

Note: * The per-trip tolls for taxis and FHVs in the adopted toll structure would be equivalent to the auto peak rate of $15 (based on 2023 NYC Taxi and Limousine Commission data for average trips per vehicle per day: for taxis the average number of trips with passengers to/from/within the CBD is 12, and for FHVs it is 6).

*Table 6.4 - Predicted VMT Changes for Taxis/FHVs (vs. No Action) (2023), Final EA and Adopted Toll Structure**

LOCATION	FINAL EA TOLLING SCENARIOS A	B	C	D	E	F	G	Modified G	ADOPTED TOLL STRUCTURE
Manhattan CBD	-21,498 (-6.6%)	+15,020 (+4.6%)	-11,371 (-3.5%)	-54,476 (-16.8%)	-25,621 (-7.9%)	+4,962 (+1.5%)	-27,757 (-8.6%)	+10,203 (+3.1%)	--904 (-0.3%)
New York City	-128,847 (-5.1%)	-29,731 (-1.2%)	-84,406 (-3.4%)	-219,068 (-8.8%)	-130,412 (-5.2%)	-25,521 (-1.0%)	-147,687 (-5.9%)	-43,481 (-1.7%)	-40,040 (-1.6%)
28-County Study Area	-126,993 (-2.9%)	-14,028 (-0.3%)	-73,413 (-1.7%)	-217,477 (-5.0%)	-116,065 (-2.7%)	-4,888 (-1.0%)	-137,815 (-3.2%)	-23,213 (-0.5%)	-30,963 (-0.7%)

* See Final EA Table 6-30, pg. 6-63, Modified G scenario discussed in Chapter 17 has been added

Movement of Goods and Services and Related Effects on Small Businesses

The Final EA included an assessment of the CBD Tolling Alternative's potential effects on movement of goods and services, including how the cost of the new toll might affect small businesses. While the new toll would increase the cost for some shippers, it would decrease it for others due to travel time savings, the potential for reduced costs associated with parking tickets, and other potential cost savings. Any cost increase would be distributed among multiple businesses because shippers typically serve multiple businesses on a journey. This is consistent with results observed in Singapore, London, and Stockholm.

The Final EA concluded that the Project would not result in adverse effects on business activity in the CBD, small businesses, or the cost of goods and services. As a Project enhancement, the Project Sponsors committed to establishing a Small Business Working Group. In addition, they committed to ensuring the overnight toll for trucks and other vehicles is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m., thus offering a lower-cost option for off-peak truck deliveries.

With the adopted toll structure, toll costs for trucks are within the range evaluated in the Final EA and the conclusions of the Final EA remain valid (see **Table 6.5**). The Project Sponsors commit to the enhancements described in the Final EA and FONSI. The Small Business Working Group held its first meeting on January 22, 2024. In addition, the overnight toll rates in the adopted toll structure were reduced beyond the commitment made in the Final EA for a longer time period (the adopted toll structure includes overnight period toll rates that are 75 percent lower than the respective peak toll rates from 9:00 p.m. to 5:00 a.m. on weekdays and 9:00 p.m. to 9:00 a.m. weekends).

Table 6.5 - Modified Final EA Table 6-31. Truck Treatment by Tolling Scenario – with the Adopted Toll Structure Added

PARAMETER	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
Potential Crossing Credits								
Credit Toward the CBD Toll for Tolls Paid at Tunnels to the CBD	No	No	Yes – Low	Yes – High	Yes – High	Yes – High	No	Yes – Low
Credit Toward the CBD Toll for Tolls Paid at Bridges to Manhattan	No	No	No	No	No	Yes – High	No	No
Potential Exemptions and Limits (Caps) on Number of Tolls per Day								
Small and large trucks	No cap	Twice per day	No cap	No cap	No cap	Once per day	No cap	No cap
Approximate Toll Rate (Small Truck / Large Truck) *								
Peak	$18 / $28	$20 / $30	$28 / $42	$38 / $57	$46 / $69	$65 / $82	$12 / $12	$24 / $36
Off Peak	$14 / $21	$15 / $23	$21 / $32	$29 / $43	$35 / $52	$49 / $62	$9 / $9	
Overnight	$9 / $14	$10 / $15	$14 / $21	$19 / $29	$23 / $35	$33 / $41	$7 / $7	$6 / $9

* Toll rates are using E-ZPass and are rounded. For all tolling scenarios, different rates would apply for vehicles not using E-ZPass.

Neighborhood-Level Effects Near the 60th Street CBD Boundary

The Final EA included an assessment of the potential reductions in parking demand to the area within the CBD but close to the boundary. The analysis considered whether changes in consumer demand could alter underlying real estate market forces at the neighborhood level, specifically focusing on off-street parking uses and demand. It concluded that reductions in the number of daily vehicle trips to the CBD would result in decreases in parking demand just south of the 60th Street CBD boundary that could jeopardize the viability of one or more parking facilities in that area. The potential closure of parking garages in that area would not create a climate of disinvestment that could lead to adverse effects on neighborhood character. With the adopted toll structure, the predicted reduction in the number of vehicles would be within the range evaluated in the Final EA (see **Table 6.6**), and the conclusions of the Final EA remain valid.

The MTA Reform and Traffic Mobility Act states that the City of New York must monitor the effects of the Project on parking within and around the Manhattan CBD, and a report must be completed 18 months after the Project commences. A parking study is being led by NYCDOT and work collecting pre-implementation baseline data is under way.

Table 6.7 presents information from the Final EA Table ES-5 summarizing the conclusions related to economic conditions, now modified to include the adopted toll structure.

Table 6.6 - Predicted Reductions in Daily Auto Journeys Between 55th and 60th Streets in the CBD (2023), Final EA and Adopted Toll Structure

REDUCTION	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
Change in daily auto journeys to CBD vs. No Action Alternative*	-20,742 (-5%)	-16,173 (-4%)	-25,559 (-7%)	-38,744 (-10%)	-40,906 (-11%)	-31,784 (-8%)	-23,056 (-6%)	-25,297 (-7%)
Potential reduction in daily auto journeys with destinations in area generally between 55th and 60th Streets vs. No Action Alternative (4.5% of total)	-933 (-5%)	-728 (-4%)	-1,150 (-7%)	-1,743 (-10%)	-1,841 (-11%)	-1,430 (-8%)	-1,038 (-6%)	-1,138 (-7%)

* See Final EA Table 6-34, pg. 6-80.

CONCLUSION

To consider the effect of the adopted toll structure on economic conditions, the Project Sponsors reviewed the parameters of the toll structure and BPM results for the adopted toll structure in comparison to results evaluated in the Final EA with respect to factors that affect economic conditions, such as movement of workforce, non-work-related trips, and effects on the taxi and FHV industry. As presented earlier, the toll rates and other parameters fall within the range evaluated in the Final EA. In addition, BPM results for the adopted toll structure for factors affecting economic conditions also fall within the range evaluated in the Final EA. Consequently, the conclusions of the Final EA remain valid. The Project Sponsors will implement the enhancement commitments described in the Final EA related to small businesses, and reduced overnight toll rates for trucks and all other vehicles.

Table 6.7 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
6 – Economic Conditions	Benefits	Regional economic benefits	28-county study area	Narrative	Economic benefit through congestion relief in terms of travel-time savings and travel-time reliability improvements, which would increase productivity and utility, as well as safety improvements and reduced vehicle operating costs associated with reductions in congestion.							No	**No mitigation needed**. Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects
	Economic Effects of Toll Costs	Cost of new toll for workers and businesses in the CBD that rely on vehicles	Manhattan CBD	Narrative	No adverse effects to any particular industry or occupational category in the Manhattan CBD. Given the high level of transit access in the CBD and high percentage of transit share, the toll would affect only a small percentage of the overall workforce. This would not adversely affect operations of businesses in the Manhattan CBD or the viability of any business types, including the taxi/FHV industry.							No	**No mitigation needed.** No adverse effects **Enhancements** The Project Sponsors commit to establishing a Small Business Working Group (SBWG) that will meet 6 months prior and 6 months after Project implementation, and annually thereafter, to solicit ongoing input on whether and how businesses are being affected. As part of mitigation for other topics, TBTA will ensure the overnight toll for trucks and other vehicles is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m. in the final CBD toll structure; this will also benefit some workers and businesses.	Same as Final EA	No	**No mitigation needed.** No adverse effects The Project Sponsors will implement the Enhancements described in the Final EA.
	Price of Goods	Cost of new toll would not result in changes in the cost of most consumer goods	Manhattan CBD	Narrative	Not anticipated to result in meaningful change in cost for most consumer goods. Any cost increase associated with the new toll in the CBD Tolling Alternative that would be passed along to receiving businesses would be distributed among several customers per toll charge (since trucks make multiple deliveries) especially for businesses, including small businesses and micro-businesses, receiving smaller deliveries. This would minimize the cost to any individual business. Some commodity sectors (construction materials, electronics, beverages) are more prone to increases due to less competition within delivery market.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
	Taxi and FHV Industry	Depending on the tolling scenario, the toll could reduce taxi and FHV revenues due to a reduction in taxi/FHV VMT with passengers within the CBD. While this could adversely affect individual drivers (see "Environmental Justice"), the industry would remain viable overall.	28-county study area	Net change in daily taxi/FHV VMT regionwide	-126,993 (-2.9%)	-14,028 (-0.3%)	-73,413 (-1.7%)	-217,477 (-5.0%)	-116,065 (-2.7%)	-4,888 (-1.0%)	-137,815 (-3.2%)	No	**No mitigation needed.** No adverse effects (see "Environmental Justice" for mitigation related to effects on taxi and FHV drivers).	-30,963 (-0.7%)	No	**No mitigation needed.** No adverse effects
				Net change in daily taxi/FHV VMT in the CBD	-21,498 (-6.6%)	+15,020 (+4.6%)	-11,371 (-3.5%)	-54,476 (-16.8%)	-25,621 (-7.9%)	+4,962 (+1.5%)	-27,757 (-8.6%)			-904 (-0.3%)		
	Local Economic Effects	Changes in parking demand near the 60th Street CBD boundary	Area near 60th Street Manhattan CBD boundary	Narrative	Changes in parking demand near the 60th Street Manhattan CBD boundary (including increases just north of 60th Street and decreases just to the south) could jeopardize the viability of one or more parking facilities in the area south of 60th Street but would not create a climate of disinvestment that could lead to adverse effects on neighborhood character.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects

Other Analyses: Parks and Recreational Resources (EA Chapter 7), Historic and Cultural Resources (EA Chapter 8), Visual Resources (EA Chapter 9)

Chapters 7, 8, and 9 of the Final EA explored the effects on three analysis areas—parks and recreational resources, historic and cultural resources, and visual resources, respectively—from the installation of the tolling infrastructure and tolling system equipment that would be used for the CBD Tolling Program. Those chapters of the Final EA concluded the following:

- **Parks and recreational resources:** The CBD Tolling Alternative would not result in adverse effects on parks and recreational resources. Except for Central Park, the CBD Tolling Alternative would not place tolling infrastructure or tolling system equipment within mapped parkland. The CBD Tolling Alternative would have a *de minimis* impact on Central Park (see also the discussion of the Final Section 4(f) Evaluation in section 19 of this reevaluation).
- **Historic and cultural resources:** The Project would not result in any direct or indirect effects on historic properties that would alter the characteristics of a historic property that qualify it for inclusion in the National Register of Historic Places, and the Project would have No Adverse Effect on historic and cultural resources.
- **Visual resources:** The visual changes introduced by the CBD Tolling Alternative would be minimal in the context of the urban landscape and would not result in adverse effects on visual quality as perceived by viewers. Therefore, the CBD Tolling Alternative would have a neutral effect on viewer groups.

The adopted toll structure would use the same tolling system equipment and infrastructure described and evaluated in the Final EA. Construction for the Project began in July 2023. Construction of tolling infrastructure and tolling system equipment is largely complete. Power and communications are nearing completion and testing is under way. With the same infrastructure and equipment and construction activities as evaluated in the Final EA, the conclusions of the Final EA for these analysis areas remain valid and no further analysis is needed. **Tables 7.1, 8.1, and 9.1** present information from the Final EA Table ES-5 summarizing the conclusions related to these topics, now modified to include the adopted toll structure.

CONCLUSION

The Final EA considered the effects from installation of tolling infrastructure and tolling system equipment related to parks and recreational resources, historic and cultural resources and visual resources. The adopted toll structure would have the same construction activities and the same permanent tolling infrastructure and tolling system equipment described and evaluated in the Final EA. Consequently, for these areas, the conclusions of the Final EA remain valid, and no additional mitigation measures are needed. The Project Sponsors will implement the mitigation commitments described in the Final EA.

Table 7.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
7 – Parks and Recreational Resources		New tolling infrastructure, tolling system equipment, and signage in the southern portion of Central Park	Manhattan CBD	Narrative	The Project would replace four existing streetlight poles at three detection locations in Central Park near 59th Street and on two adjacent sidewalks outside the park's wall. These poles would be in the same locations as existing poles and would not reduce the amount of park space or affect the features and activities of the park. The Project would also place tolling infrastructure beneath the structure of the High Line, outside the park area atop the High Line structure. Following consideration of public input received during the public comment period, FHWA concluded the CBD Tolling Alternative would not affect the activities, features, and attributes that qualify the High Line for protection under Section 4(f), and the CBD Tolling Alternative would have a *de minimis* impact on Central Park.							No	**No mitigation needed.** Refer to **Chapter 7, "Parks and Recreational Resources,"** for a listing of measures to avoid adverse effects to parks.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	**No mitigation needed.** The Project Sponsors will implement measures described in the Final EA.

Table 8.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
8 – Historic and Cultural Resources		New tolling infrastructure and tolling system equipment on or near historic properties	45 historic properties within the Project's Area of Potential Effects (APE)	Narrative	Based on a review of the Project in accordance with Section 106 of the National Historic Preservation Act, FHWA has determined that the Project would have No Adverse Effect on historic properties and the State Historic Preservation Office has concurred.							No	**No mitigation needed.** Refer to **Chapter 8, "Historic and Cultural Resources,"** for a listing of measures to avoid adverse effects to historic properties.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	**No mitigation needed.** The Project Sponsors will implement the measures described in the Final EA.

Table 9.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
9 – Visual Resources		Changes in visual environment resulting from new tolling infrastructure and tolling system equipment	Area of visual effect	Narrative	Infrastructure and equipment would be similar in form to streetlight poles, sign poles, or similar structures already in use throughout New York City. Cameras included in the array of tolling system equipment would use infrared illumination at night to allow images of license plates to be collected without any need for visible light. The Project would have a neutral effect on viewer groups and no adverse effect on visual resources							No	**No mitigation needed.** o adverse effects	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	**No mitigation needed.** No adverse effects.

10 Air Quality

Chapter 10 of the Final EA presented the assessment of the CBD Tolling Alternative's effects on air quality, air pollution, and greenhouse gas (GHG) emissions. The Final EA evaluated regional criteria pollutants, mobile source air toxic (MSAT) and GHG emissions, as well as potential effects at local intersections and highway segments. This section compares the air quality effects of the adopted toll structure to those predicted in the Final EA. Additional information is provided in **Appendix 10**.

METHODOLOGY

Final EA Methodology

Regional Analysis

1. Mesoscale analyses of criteria air pollutants, MSATs, and GHGs were conducted for a 12-county study area (see Final EA page 10-11). It included the 10-county area under the purview of the New York Metropolitan Transportation Council (NYMTC), which is the Metropolitan Planning Organization (MPO) for New York City, as well as the two counties in New Jersey with the greatest potential changes in VMT due to the Project (greatest increase and decrease). No Connecticut counties were analyzed because they were predicted to see decreases in VMT. The 12-county study area included the following:
    - New York City – Bronx, Kings (Brooklyn), New York (Manhattan), Queens, Richmond (Staten Island)
    - Long Island – Nassau, Suffolk
    - New York North of New York City – Putnam, Rockland, Westchester
    - New Jersey – Bergen, Hudson.
2. The version of the U.S. Environmental Protection Agency (USEPA) emissions model current at the time the regional analysis for the EA was begun, MOVES2014b, was used to estimate the mobile source emission factors for the mesoscale, MSAT, and GHG analyses.
3. Final EA Tolling Scenario A was analyzed, because it had the smallest reduction of VMT compared to the No Action Alternative and would therefore have the lowest beneficial effect on regional air quality.
4. For the No Action Alternative and Tolling Scenario A, MOVES was run using post-processed VMT[2], speeds, and vehicle mix, as well as the latest site-specific input data from the New York State Department of Environmental Conservation (NYSDEC) and the North Jersey Transportation Planning Authority (NJTPA), which is the MPO for the New Jersey counties in the study area.

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[2] The NYMTC Post Processor software was used for the 10-county NYMTC area. Information on post-processing adjustments can be found in NYMTC's Final Adopted *2023 Conformity Determination*, pg. 23, at: https://www.nymtc.org/en-us/Required-Planning-Products/Transportation-Conformity/Transportation-Conformity-Determination-Documents-adopted.

Draft, Privileged and Confidential – for discussion purposes only; data still being assessed.

Microscale Analysis

1. Identified the intersections for analysis from the traffic analysis presented in Final EA Subchapter 4B, "Highways and Local Intersections." This included 102 intersections in a total of 15 different study areas.
2. Conducted screening analysis for pollutants of concern on a localized (microscale) level: CO, $PM_{2.5}$, and PM_{10}. The screening was conducted using the criteria from NYSDOT's *The Environmental Manual* (TEM), Chapter 1.1 and USEPA guidance (see the Final EA, Chapter 10, Sections 10.1.7.3 and 10.1.7.4) (see Final EA Sections 10.1.7.2 and 10.1.7.3).
3. All 102 intersections passed the screening analysis, and no detailed air quality analysis (modeling) was necessary.

Highway Link Analysis

1. Identified highway link locations and tolling scenario for analysis, based on the following:
   - Location with highest total Annual Average Daily Traffic (AADT) in any tolling scenario
   - Location of community concern, in worst-case scenario
   - Location with highest truck increase in any tolling scenario.
2. Conducted modeling of particulate matter (PM) using the regional model current at the time of the highway link analysis, USEPA's MOVES3 and AERMOD models.

Reevaluation Methodology

Regional Analysis

1. The analysis was conducted for the same 12-county study area as in the Final EA.
2. USEPA's current emission model, MOVES3.1, was used to estimate the mobile source emission factors for the mesoscale, MSAT, and GHG analyses in the reevaluation.
3. For the No Action Alternative and the adopted toll structure, MOVES3.1 was run using VMT (direct output from the BPM for the Project's 2023 analysis year), speeds, vehicle mix, as well as the latest site-specific input data from NYSDEC and NJTPA.

Microscale Analysis

1. Using the same information on incremental traffic volumes from the adopted toll structure at the 102 intersections as was used for the traffic analysis reevaluation, conducted screening analysis using the same methodology as the Final EA
2. As in the Final EA, all 102 intersections passed the screening analysis, and no detailed air quality analysis (modeling) was necessary.

Highway Link Analysis

1. Determined if locations for the adopted toll structure remain the same as the locations evaluated in the Final EA, based on the same factors:

- Highest total AADT (based on BPM results for adopted toll structure)
- Community concern
- Highest truck increase (based on BPM results for adopted toll structure).

2. For the locations evaluated in the Final EA, reviewed whether the applicable criteria (i.e., AADT or truck increments) with the adopted toll structure are higher than those analyzed in the Final EA.
3. For any locations identified in Step 1 that are different than those studied in the Final EA, or any Final EA locations where the increase in traffic was greater than that analyzed in the EA, conducted modeling of PM using USEPA's MOVES3.1 and AERMOD models.

The modeling approach for the reevaluation and models used for the Final EA are summarized in **Table 10.1** below.

Table 10.1 - Summary of Models Used for Final EA and Reevaluation Methodology

TOPIC	LOCATION IN FINAL EA, CHAPTER 10, "AIR QUALITY"	MODEL(S) USED IN FINAL EA	MODELING APPROACH FOR REEVALUATION
Regional Analysis	Methodology – Section 10.1.7.1, page10-10 Environmental Consequences – Section 10.3.2.1, page 10-21	▪ **MOVES2014b** (current version at time of analysis – no longer being updated or supported for use) ▪ VMT from NYMTC's post-processor (in coordination with NYMTC and the ICG, this step was taken to show that the Project would be consistent with NYMTC's conformity analysis because at the time of analysis the Project was not yet on the Transportation Improvement Plan (TIP))	▪ **MOVES3.1** (latest update to MOVES3 - https://www.epa.gov/moves/moves3-update-log) ▪ VMT direct from BPM (used Final EA network, VMT post-processing not required because the Project was added to the TIP and included in NYMTC conformity determination ▪ in 2022)
Microscale Analysis	Methodology – 10.1.7.2, page 10-14 Environmental Consequences – Section 10.3.2.2, page 10-42	▪ Screening only; no modeling required	▪ Screening only; no modeling required
Highway Link Analysis	Methodology – 10.1.7.5, page 10-16 Environmental Consequences – Section 10.3.2.3, page 10-46	▪ **MOVES3** (current version at time of analysis) ▪ **AERMOD version 21112** (current version at time of analysis – no longer being updated or supported for use) ▪ VMT direct from BPM	▪ **MOVES3.1** (latest update to MOVES3 - https://www.epa.gov/moves/moves3-update-log) ▪ **AERMOD** version 23132 (current version) ▪ VMT direct from BPM (Final EA Network)

ANALYSIS AND FINDINGS

Regional (Mesoscale) Analysis

In the Final EA, the regional analysis concluded that the CBD Tolling Alternative would benefit regional air quality by reducing criteria pollutants, MSATs, and GHG overall in the 12-county study area.

For the reevaluation, the regional analysis also concluded that the adopted toll structure would benefit regional air quality by reducing criteria pollutants, MSATs, and GHG overall in the 12-county study area. **Tables 10.2 through 10.4** present the results of the mesoscale air quality analysis for the adopted toll structure in comparison to the results for Tolling Scenario A from the Final EA. Additional information is provided in **Appendix 10**. Based on these analyses, the conclusions in the Final EA for both 2023 and 2045 remain valid.

Furthermore, the Project continues to be included in NYMTC's regional emissions analysis and the most recent conformity determination, which was approved by FHWA and the Federal Transit Administration on January 5, 2024.

Table 10.2 - Final EA Table 10-7. Mesoscale Emission Burdens, CBD Tolling Alternative (Tolling Scenario A, tons/year) – With the Adopted Toll Structure (Analysis Year 2023)

POLLUTANT	FINAL EA			ADOPTED TOLL STRUCTURE		
	No Action Alternative	CBD Tolling Alternative (Tolling Scenario A)	% Difference	No Action Alternative	Adopted Toll Structure	% Difference
Daily Vehicle-Miles Traveled (miles/day) – BPM Output for 12-County Study Area	146,956,932	146,556,877	-0.3%	146,956,932	146,387,802	-0.4%
Daily Vehicle-Miles Traveled (miles/day) – Post Processed for 12-County Study Area	182,736,632	182,143,856	-0.3%	N/A	N/A	N/A
Volatile Organic Compounds (VOC)	17,698	17,667	-0.2%	6,567	6,541	-0.4%
Nitrogen Oxides (NO_x)	23,956	23,864	-0.4%	12,437	12,378	-0.5%
Carbon Monoxide (CO)	227,726	227,074	-0.3%	93,881	93,220	-0.7%
Particulate Matter (PM_{10})	5,884	5,828	-1.0%	2,878	2,849	-1.0%
Particulate Matter ($PM_{2.5}$)	1,452	1,441	-0.7%	604	599	-0.8%
Carbon Dioxide Equivalents (CO_2e)	32,445,206	32,236,481	-0.6%	17,461,889	17,360,966	-0.6%

Note: For the Final EA, post processed vehicle-miles traveled were used for analysis. They were generated off of the NYMTC Best Practice Model (BPM) outputs using the NYMTC Post Processor software. They are higher than the NYMTC BPM outputs due to a series of seasonal adjustments. NYMTC's Transportation Conformity Determination includes details on these adjustments: https://www.nymtc.org/Required-Planning-Products/Transportation-Conformity/Transportation-Conformity-Determination-Documents-adopted. Post processing is conducted in accordance with NYMTC's procedures to generate maximum potential worst-case conditions for TIP conformity analyses only when a Project has not yet been included in the conformity analysis of an adopted TIP – as was the case at the time the mesoscale analysis was begun for the Final EA. Post processing was not conducted for the adopted toll structure in the Reevaluation, as the Project is now part of the TIP for which NYMTC's 2022 conformity analysis was completed.

Table 10.3 - Final EA Table 10-8. Mesoscale Emission Burden Percentage Changes by County, CBD Tolling Alternative (Tolling Scenario A, Analysis Year 2023) – With the Adopted Toll Structure Below

POLLUTANT	FINAL EA TOLLING SCENARIO A – PERCENT CHANGE FROM NO ACTION ALTERNATIVE (FINAL EA NETWORK RUN POST-PROCESSED, ANALYZED IN MOVES2014B)												
	New York												
	CBD Only	Entire County	Queens	Bronx	Kings	Richmond	Nassau	Suffolk	Westchester	Rockland	Putnam	Hudson	Bergen
Daily Vehicle-Miles Traveled	-11.56%	-5.88%	-0.36%	0.15%	-0.74%	1.73%	0.03%	-0.03%	-0.22%	-0.17%	0.28%	-2.24%	0.88%
Volatile Organic Compounds (VOC)	-4.96%	-3.29%	-0.32%	0.03%	-0.32%	0.44%	0.05%	0.02%	0.21%	-0.05%	-0.03%	-0.66%	0.20%
Nitrogen Oxides (NO_x)	-9.54%	-5.96%	-0.56%	0.09%	-0.68%	1.26%	0.09%	0.00%	-0.25%	-0.12%	0.37%	-1.85%	0.63%
Carbon Monoxide (CO)	-7.58%	-4.58%	-0.37%	0.02%	-0.51%	0.89%	0.03%	-0.03%	-0.13%	-0.05%	0.00%	-1.02%	0.49%
Particulate Matter (PM_{10})	-12.16%	-9.75%	-1.23%	0.30%	-1.00%	2.12%	0.19%	0.11%	-0.32%	-0.36%	0.31%	-3.86%	0.74%
Particulate Matter ($PM_{2.5}$)	-11.37%	-8.52%	-0.99%	0.20%	-0.90%	1.80%	0.14%	0.06%	-0.23%	-0.25%	0.26%	-3.00%	0.69%
Carbon Dioxide Equivalents (CO_2e)	-11.48%	-7.92%	-0.84%	0.15%	-0.88%	1.76%	0.15%	0.03%	-0.40%	-0.23%	0.17%	-3.03%	0.80%

Source: WSP, 2022.

POLLUTANT	ADOPTED TOLL STRUCTURE – PERCENT CHANGE FROM NO ACTION ALTERNATIVE (FINAL EA NETWORK RUN, ANALYZED IN MOVES3.1)												
	New York												
	CBD Only	Entire County	Queens	Bronx	Kings	Richmond	Nassau	Suffolk	Westchester	Rockland	Putnam	Hudson	Bergen
Daily Vehicle-Miles Traveled	-8.90%	-5.47%	-0.68%	0.15%	-0.61%	2.35%	-0.10%	0.00%	-0.59%	-0.35%	-0.06%	-2.23%	1.11%
Volatile Organic Compounds (VOC)	-5.44%	-4.27%	-0.36%	-1.11%	-0.45%	0.94%	-0.05%	0.01%	-0.25%	-0.06%	0.02%	-2.08%	0.45%
Nitrogen Oxides (NO_x)	-7.41%	-4.85%	0.67%	1.48%	0.03%	2.47%	-0.09%	0.02%	-0.31%	-0.21%	-0.05%	-4.96%	0.92%
Carbon Monoxide (CO)	-10.83%	-6.91%	-0.92%	-0.42%	-0.99%	2.24%	-0.10%	0.01%	-0.60%	-0.32%	0.00%	-3.59%	1.05%
Particulate Matter (PM_{10})	-11.02%	-7.26%	-0.65%	0.94%	-1.08%	2.70%	-0.12%	0.07%	-0.58%	-0.22%	0.16%	-6.34%	0.94%
Particulate Matter ($PM_{2.5}$)	-10.49%	-6.59%	-0.31%	0.95%	-0.73%	2.51%	-0.11%	0.06%	-0.46%	-0.23%	0.06%	-5.39%	1.00%
Carbon Dioxide Equivalents (CO_2e)	-11.00%	-6.46%	-0.56%	0.34%	-0.75%	2.30%	-0.10%	0.01%	-0.54%	-0.31%	-0.02%	-3.91%	1.06%

Source: WSP, 2024.

Yellow highlights indicate an increase compared to the No Action Alternative.

Table 10.4 - Final EA Table 10-11. Mobile Source Air Toxics Emission Burden Percentage Changes by County, CBD Tolling Alternative (Tolling Scenario A, Analysis Year 2023) – With the Adopted Toll Structure Below

POLLUTANT	FINAL EA TOLLING SCENARIO A – PERCENT CHANGE FROM NO ACTION ALTERNATIVE (FINAL EA NETWORK RUN POST-PROCESSED, ANALYZED IN MOVES2014B)												
	New York												
	CBD Only	Entire County	Queens	Bronx	Kings	Richmond	Nassau	Suffolk	Westchester	Rockland	Putnam	Hudson	Bergen
Daily Vehicle-Miles Traveled	-11.56%	-5.88%	-0.36%	0.15%	-0.74%	1.73%	0.03%	-0.03%	-0.22%	-0.17%	0.28%	-2.24%	0.88%
1,3-Butadiene	-11.82%	-9.11%	-1.12%	0.17%	-0.99%	1.96%	0.22%	0.07%	-0.25%	-0.26%	0.30%	-3.93%	0.81%
Acetaldehyde	-11.78%	-9.09%	-1.13%	0.16%	-0.99%	1.95%	0.26%	0.08%	-0.25%	-0.27%	0.30%	-3.96%	0.79%
Acrolein	-11.79%	-9.25%	-1.17%	0.15%	-1.01%	1.98%	0.29%	0.10%	-0.26%	-0.28%	0.29%	-4.05%	0.77%
Benzene	-10.91%	-7.37%	-0.74%	0.05%	-0.82%	1.56%	0.13%	0.01%	-0.19%	-0.17%	0.27%	-2.48%	0.70%
Diesel PM	-11.79%	-8.64%	-0.94%	0.20%	-0.94%	1.99%	0.23%	0.10%	-0.28%	0.00%	0.28%	-3.44%	0.74%
Ethylbenzene	-8.58%	-6.14%	-0.65%	0.07%	-0.63%	1.01%	0.12%	0.03%	-0.11%	-0.12%	0.15%	-1.57%	0.40%
Formaldehyde	-11.78%	-9.18%	-1.15%	0.16%	-1.00%	1.96%	0.29%	0.09%	-0.26%	-0.28%	0.29%	-4.02%	0.77%
Naphthalene	-11.76%	-9.06%	-1.13%	0.14%	-0.99%	1.95%	0.27%	0.08%	-0.25%	-0.27%	0.29%	-3.96%	0.78%
Polycyclic Organic Matter	-11.59%	-8.46%	-0.99%	0.09%	-0.96%	1.84%	0.20%	0.04%	-0.24%	-0.25%	0.30%	-3.62%	0.82%

Source: WSP, 2022.

POLLUTANT	ADOPTED TOLL STRUCTURE – PERCENT CHANGE FROM NO ACTION ALTERNATIVE (FINAL EA NETWORK RUN, ANALYZED IN MOVES3.1)												
	New York												
	CBD Only	Entire County	Queens	Bronx	Kings	Richmond	Nassau	Suffolk	Westchester	Rockland	Putnam	Hudson	Bergen
Daily Vehicle-Miles Traveled	-8.90%	-5.47%	-0.68%	0.15%	-0.61%	2.35%	-0.10%	0.00%	-0.59%	-0.35%	-0.06%	-2.23%	1.11%
1,3-Butadiene	-11.26%	-6.99%	-0.80%	0.33%	-0.93%	2.35%	-0.11%	0.03%	-0.59%	-0.28%	-8.33%	-5.84%	1.01%
Acetaldehyde	-6.76%	-4.80%	0.24%	0.80%	-0.33%	2.39%	-0.10%	0.03%	-0.45%	-0.25%	-6.72%	-8.19%	0.91%
Acrolein	-7.96%	-5.10%	0.24%	1.01%	-0.27%	2.09%	-0.09%	0.02%	-0.39%	-0.25%	-5.90%	-7.10%	0.90%
Benzene	-10.29%	-6.48%	-0.74%	-0.37%	-0.87%	1.72%	-0.09%	0.02%	-0.48%	-0.29%	-8.50%	-4.67%	1.04%
Diesel PM	-8.60%	-4.84%	1.09%	1.22%	0.45%	2.31%	-0.06%	0.06%	-0.23%	-0.17%	-4.43%	-4.89%	1.04%
Ethylbenzene	-6.34%	-4.80%	-0.48%	-0.02%	-0.56%	1.09%	-0.06%	0.02%	-0.29%	-0.27%	-8.62%	-5.71%	0.99%
Formaldehyde	-7.09%	-4.83%	0.12%	0.79%	-0.37%	2.20%	-0.10%	0.02%	-0.45%	-0.27%	-6.48%	-8.50%	0.93%
Naphthalene	-9.13%	-5.61%	-0.26%	0.77%	-0.56%	2.06%	-0.10%	0.02%	-0.48%	-0.28%	-6.86%	-6.99%	0.96%
Polycyclic Organic Matter	-9.43%	-5.68%	-0.24%	0.80%	-0.51%	2.07%	-0.10%	0.02%	-0.46%	-0.27%	-6.69%	-6.40%	0.99%

Source: WSP, 2024.

Yellow highlights indicate an increase compared to the No Action Alternative.

Draft, Privileged and Confidential – for discussion purposes only; data still being assessed.

Microscale Analysis

For both the Final EA and the reevaluation, all 102 local intersections passed the screening analysis. As such, no further analysis was needed. **Table 10.5** illustrates the results of the microscale screening analysis for the Final EA and the adopted toll structure. Additional information is provided in **Appendix 10**.

Table 10.5 - Final EA Table 10-13. CO and $PM_{2.5}/PM_{10}$ Microscale Screening Results 2023, CBD Tolling Alternative (Tolling Scenario C and Tolling Scenario D) – With the Adopted Toll Structure Added

LOCATION	INTERSECTION	FINAL EA		ADOPTED TOLL STRUCTURE	
		CO SCREENING	$PM_{2.5}/PM_{10}$ SCREENING	CO SCREENING	$PM_{2.5}/PM_{10}$ SCREENING
Downtown Brooklyn	Flatbush Ave & Tillary St	Passed	Passed	Passed	Passed
	Adams St & Tillary St	Passed	Passed	Passed	Passed
	Old Fulton St & Vine St	Passed	Passed	Passed	Passed
Lincoln Tunnel (Manhattan)	Ninth Ave & West 33rd St	Passed	Passed	Passed	Passed
	Dyer Ave & West 34th St	Passed	Passed	Passed	Passed
	Twelfth Ave & West 34th St	Passed	Passed	Passed	Passed
	Eleventh Ave & West 42nd St	Passed	Passed	Passed	Passed
	Dyer Ave & West 36th St	Passed	Passed	Passed	Passed
	Tenth Ave & West 33rd St	Passed	Passed	Passed	Passed
	Eleventh Ave & West 34th St	Passed	Passed	Passed	Passed
	Tenth Ave & West 41st St	Passed	Passed	Passed	Passed
	Twelfth Ave & West 42nd St	Passed	Passed	Passed	Passed
Long Island City (Queens)	Pulaski Bridge/11th St & Jackson Ave	Passed	Passed	Passed	Passed
	11th St & 48th Ave	Passed	Passed	Passed	Passed
	50th Ave at Vernon Blvd	Passed	Passed	Passed	Passed
	Green St & McGuiness Blvd	Passed	Passed	Passed	Passed
	McGuinness Blvd & Freeman St	Passed	Passed	Passed	Passed
	21st St & 49th Ave	Passed	Passed	Passed	Passed
	11th St & Borden Ave	Passed	Passed	Passed	Passed
	Van Dam St & Queens-Midtown Tunnel Expwy	Passed	Passed	Passed	Passed
	Van Dam St & Borden Ave	Passed	Passed	Passed	Passed
	Jackson Ave/Northern Blvd & Queens Plaza	Passed	Passed	Passed	Passed
	Thomson Ave & Dutch Kills St	Passed	Passed	Passed	Passed
	Thomson Ave & Dutch Kills St	Passed	Passed	Passed	Passed
	21st St & Queens Plaza N	Passed	Passed	Passed	Passed
Lower Manhattan (Manhattan)	Trinity Place & Edgar St	Passed	Passed	Passed	Passed
	Trinity Place & Rector St	Passed	Passed	Passed	Passed
	Hugh L. Carey Tunnel Entrance/Exit & West St	Passed	Passed	Passed	Passed
	Hugh L. Carey Tunnel Exit & West St & West Thames St	Passed	Passed	Passed	Passed
	Chambers St & Centre St	Passed	Passed	Passed	Passed
	Canal & Hudson Sts/Holl& Tunnel On-Ramp	Passed	Passed	Passed	Passed
	Canal St & Holl& Tunnel On-Ramp	Passed	Passed	Passed	Passed
	Canal St S & West St	Passed	Passed	Passed	Passed

LOCATION	INTERSECTION	FINAL EA		ADOPTED TOLL STRUCTURE	
		CO SCREENING	$PM_{2.5}/PM_{10}$ SCREENING	CO SCREENING	$PM_{2.5}/PM_{10}$ SCREENING
	West St & Albany St	Passed	Passed	Passed	Passed
	West St & Vesey St	Passed	Passed	Passed	Passed
	West St & Chambers St	Passed	Passed	Passed	Passed
	Canal St/Manhattan Bridge & Bowery	Passed	Passed	Passed	Passed
	Manhattan Bridge & Bowery	Passed	Passed	Passed	Passed
	Sixth Ave & Watts St	Passed	Passed	Passed	Passed
	Canal St & Sixth Ave/Laight St	Passed	Passed	Passed	Passed
New Jersey	14th St/Holl& Tunnel (E-W) & Marin Blvd (N-S)	Passed	Passed	Passed	Passed
	14th St (E-W) & Jersey Ave (N-S)	Passed	Passed	Passed	Passed
	12th St (E-W) & Jersey Ave (N-S)	Passed	Passed	Passed	Passed
	12th St/Holl& Tunnel (E-W) & Marin Blvd (N-S)	Passed	Passed	Passed	Passed
Queens-Midtown Tunnel (Manhattan)	East 37th St & Third Ave	Passed	Passed	Passed	Passed
	East 36th St & Second Ave	Passed	Passed	Passed	Passed
	East 34th St & Third Ave	Passed	Passed	Passed	Passed
	East 35th St & Third Ave	Passed	Passed	Passed	Passed
	East 34th St & Second Ave	Passed	Passed	Passed	Passed
	East 35th St & Second Ave	Passed	Passed	Passed	Passed
Red Hook (Brooklyn)	Hamilton Ave, Clinton St & West 9th St	Passed	Passed	Passed	Passed
	Hamilton Ave (northbound) & West 9th St	Passed	Passed	Passed	Passed
Robert F. Kennedy Bridge (Manhattan, the Bronx, Queens)	East 126th St & Second Ave	Passed	Passed	Passed	Passed
	East 125th St & Second Ave	Passed	Passed	Passed	Passed
	East 134th St & St. Ann's Ave	Passed	Passed	Passed	Passed
	St. Ann's Ave & Bruckner Blvd	Passed	Passed	Passed	Passed
	31st St & Astoria Blvd	Passed	Passed	Passed	Passed
	Hoyt Ave North & 31st St	Passed	Passed	Passed	Passed
	Hoyt Ave South & 31st St	Passed	Passed	Passed	Passed
Upper East Side (Manhattan)	East 60th St & Ed Koch Queensboro Bridge Exit	Passed	Passed	Passed	Passed
	East 60th St & Third Ave	Passed	Passed	Passed	Passed
	East 60th St & York Ave	Passed	Passed	Passed	Passed
	East 59th St & Second Ave	Passed	Passed	Passed	Passed
	East 60th St & Second Ave	Passed	Passed	Passed	Passed
	East 60th St & First Ave	Passed	Passed	Passed	Passed
	East 60th St & Lexington Ave	Passed	Passed	Passed	Passed
	East 60th St & Park Ave (northbound)	Passed	Passed	Passed	Passed
	East 60th St & Park Ave (south- & westbound)	Passed	Passed	Passed	Passed
	East 60th St & Madison Ave	Passed	Passed	Passed	Passed
	East 62nd St & Ed Koch Queensboro Bridge Exit	Passed	Passed	Passed	Passed
	East 60th St & Fifth Ave	Passed	Passed	Passed	Passed
	East 63rd St & York Ave	Passed	Passed	Passed	Passed
	East 53rd St & Franklin D. Roosevelt Dr	Passed	Passed	Passed	Passed
	East 61st St & Fifth Ave	Passed	Passed	Passed	Passed
	East 65th St & Fifth Ave	Passed	Passed	Passed	Passed
	East 66th St & Fifth Ave	Passed	Passed	Passed	Passed
	East 79th St & Fifth Ave	Passed	Passed	Passed	Passed

LOCATION	INTERSECTION	FINAL EA		ADOPTED TOLL STRUCTURE	
		CO SCREENING	$PM_{2.5}/PM_{10}$ SCREENING	CO SCREENING	$PM_{2.5}/PM_{10}$ SCREENING
	East 71st St & York Ave	Passed	Passed	Passed	Passed
Upper West Side (Manhattan)	West 72nd St & West End Ave	Passed	Passed	Passed	Passed
	West 61st St & West End Ave	Passed	Passed	Passed	Passed
	West 79th St & Riverside Drive	Passed	Passed	Passed	Passed
	West 56th St & Twelfth Ave	Passed	Passed	Passed	Passed
	West 56th St & West Side Hwy	Passed	Passed	Passed	Passed
	West 55th St & West Side Hwy	Passed	Passed	Passed	Passed
	West 55th St & Twelfth Ave	Passed	Passed	Passed	Passed
	West 55th St & West Side Hwy Arterial	Passed	Passed	Passed	Passed
	West 60th St & Broadway	Passed	Passed	Passed	Passed
	West 60th St & Columbus Ave	Passed	Passed	Passed	Passed
	West 60th St & Amsterdam Ave	Passed	Passed	Passed	Passed
	West 60th St & West End Ave	Passed	Passed	Passed	Passed
	West 61st St & Amsterdam Ave	Passed	Passed	Passed	Passed
	West 61st St & Columbus Ave	Passed	Passed	Passed	Passed
	West 61st St & Broadway	Passed	Passed	Passed	Passed
	West 61st St & Columbus Ave	Passed	Passed	Passed	Passed
	West 81st St & Central Park West	Passed	Passed	Passed	Passed
	West 66th St & Central Park West	Passed	Passed	Passed	Passed
	West 65th St & Central Park West	Passed	Passed	Passed	Passed
West Side Hwy / Rte 9A (Manhattan)	West 24th St & Twelfth Ave	Passed	Passed	Passed	Passed
Little Dominican Republic (Manhattan)	West 179th St & Broadway	Passed	Passed	Passed	Passed
Lower East Side (Manhattan)	Park Row/Chatham Sq, Worth/Oliver St & Mott St	Passed	Passed	Passed	Passed
	Chatham Square & East Broadway	Passed	Passed	Passed	Passed
	Chatham Square/Bowery & Division St	Passed	Passed	Passed	Passed

Highway Link Analysis

For the Final EA, highway link analyses for particulate matter (PM) effects were conducted at three sites:

- I-95 west of the George Washington Bridge, Tolling Scenario C – Highest total AADT in any scenario
- Cross Bronx Expressway at Macombs Road, Tolling Scenario B – Community concern
- Robert F. Kennedy (Triborough) Bridge Queens approach, Tolling Scenario E – Highest truck increase in any scenario

At all sites, predicted PM concentrations with the Project would be below the National Ambient Air Quality Standards (NAAQS).

In addition, a screening analysis was conducted for potential carbon monoxide (CO) effects at a location of community concern (FDR Drive at 10th Street); this location passed the screening and, therefore, no further analysis was required.

For the reevaluation, all highway links were evaluated to determine if those locations analyzed in the Final EA still represent worst-case conditions with the adopted toll structure. The findings are as follows (see also **Appendix 10**):

- **Highest total AADT:** I-95 west of the George Washington Bridge still represents the location with the highest AADT. As shown in **Table 10.6**, With the adopted toll structure, the AADT at this location would be higher than that analyzed in the Final EA (although total and incremental truck volumes would be lower than in the Final EA). Therefore, additional modeling was conducted using MOVES3.1. The modeling showed that the predicted PM concentrations with the adopted toll structure would still be below the applicable NAAQS (see **Table 10.7**). Therefore, the conclusions of the Final EA remain valid.
- **Community concern:** At the Cross Bronx Expressway at Macombs Road location, the AADT and truck volume changes with the adopted toll structure would be below the maximum increment analyzed in the Final EA, where the results were below NAAQS, and no adverse effect was found. Therefore, no additional modeling was necessary, and the conclusions of the Final EA remain valid.
- **Highest truck increase:** The Robert F. Kennedy (RFK) Bridge Queens approach would still be the location with the largest truck increase. The truck volume changes at the RFK Bridge for the adopted toll structure are all below the maximum increment analyzed in the Final EA, where the results were below NAAQS, and no adverse effect was found. Therefore, no additional modeling was necessary, and the conclusions of the Final EA remain valid.

In addition, as in the Final EA, a screening analysis was conducted for the adopted toll structure for potential CO impacts at the location of community concern (FDR Drive at 10th Street); this location passed the screening and, therefore, no further analysis is required.

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Table 10.6 - Changes in AADT and Trucks (2023), Final EA and Adopted Toll Structure

LINK #	COUNTY	ROADWAY	NO ACTION		FINAL EA SCENARIO C		ADOPTED TOLL STRUCTURE	
			AADT	Trucks	AADT	Trucks	AADT	Trucks
268133 & 268131	Bergen	I-95 West of the George Washington Bridge	241,327	34,133	249,307	34,862	251,668	34,632
Change from No Action					7,980	729	10,341	499
Percent Change from No Action					3.3%	2.1%	4.3%	1.5%

Table 10.7 - Changes in Particulate Matter Concentrations (2023), Final EA and Adopted Toll Structure – I-95 West of the George Washington Bridge

FINAL EA TABLE*	POLLUTANT	FINAL EA		ADOPTED TOLL STRUCTURE		NAAQS ($\mu g/m^3$)
		No Action Alternative – MOVES3 ($\mu g/m^3$)	Final EA Tolling Scenario C ($\mu g/m^3$)	No Action Alternative – MOVES3.1 ($\mu g/m^3$)	Adopted Toll Structure ($\mu g/m^3$)	
Table 1	PM10	105	107	88	89	150
Table 2	$PM_{2.5}$ 24-hour	29.5	29.7	27.8	28.0	35.0
Table 3	$PM_{2.5}$ Annual	11.1	11.2	10.8	10.9	12.0

* See Final EA Appendix 10D, page 10-52.

Note: No Action pollutant concentrations are lower than in the Final EA because MOVES 3.1 (latest version) was used with the latest input files (vehicle age distribution, vehicle mix) and meteorological data in AERMOD for the reevaluation. Incremental changes from the No Action under the adopted toll structure are the same or less than those for Final EA Tolling Scenario C.

Table 10.8 presents information from the Final EA Table ES-5 summarizing the conclusions related to air quality, now modified to include the adopted toll structure.

CONCLUSION

The Final EA evaluated the CBD Tolling Alternative's effects on regional air pollutants and at local intersections and highway segments using screening-level analyses and detailed air quality modeling, as appropriate. Using BPM results for the adopted toll structure, the Project Sponsors applied the same methodology for the reevaluation of air quality. The analysis demonstrates that there are no potential adverse effects related to air quality and the conclusions of the Final EA remain valid. No additional mitigation is needed and the Project Sponsors remain committed to the enhancement measures described in the Final EA and FONSI.

Table 10.8 - Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
				A	B	C	D	E	F	G					
10 – Air Quality	Increases or decreases in emissions related to truck traffic diversions	Cross Bronx Expressway at Macombs Road, Bronx, NY	Increase or decrease in Annual Average Daily Traffic (AADT)	3,901	3,996	2,056	1,766	3,757	2,188	3,255	No	**No mitigation needed.** No adverse effects **Enhancements** **1.** Refer to the overall enhancement on monitoring at the end of this table. **2.** TBTA will work with NYC DOHMH to expand the existing network of sensors to monitor priority locations and supplement a smaller number of real-time $PM_{2.5}$ monitors to provide insight into time-of-day patterns to determine whether the changes in air pollution can be attributed to changes in traffic occurring after implementation of the Project. The Project Sponsors will select the additional monitoring locations in consideration of air quality analysis in the EA and input from environmental justice stakeholders. NYS Department of Environmental Conservation (NYSDEC) and other agencies conducting monitoring will also be consulted prior to finalizing the monitoring approach. The Project Sponsors will monitor air quality prior to implementation (setting a baseline), and two years following implementation. Following the initial two-year post-implementation analysis period, and separate from ongoing air quality monitoring and reporting, the Project Sponsors will assess the magnitude and variability of changes in air quality to determine whether more monitoring sites are necessary. Data collected throughout the monitoring program will be made available publicly as data becomes available and analysis is completed. Data from the real-time monitors will be available online continuously from the start of pre-implementation monitoring. **3.** MTA is currently transitioning its fleet to zero-emission buses, which will reduce air pollutants and improve air quality near bus depots and along bus routes. MTA is committed to prioritizing traditionally underserved communities and those impacted by poor air quality and climate change and has developed an approach that actively incorporates these priorities in the deployment phasing process of the transition. Based on feedback received during the outreach conducted for the Project and concerns raised by members of environmental justice communities, TBTA coordinated with MTA NYCT, which is committed to prioritizing the Kingsbridge Depot and Gun Hill Depot, both located in and serving primarily environmental justice communities in	3,917	No	**No mitigation needed.** The Project Sponsors are maintaining their commitment to implement the enhancement measures identified in the Final EA and FONSI.
			Increase or decrease in daily number of trucks	509	704	170	510	378	536	50			433		
			Potential adverse air quality effects from truck diversions	No	No	No	No	No	No	No			No		
		I-95, Bergen County, NJ	Increase or decrease in AADT	9,843	11,459	7,980	5,003	7,078	5,842	12,506	No		10,341	No	
			Increase or decrease in daily number of trucks	801	955	729	631	696	637	-236			499		
			Potential adverse air quality effects from truck diversions	No	No	No	No	No	No	No			No		
		RFK Bridge, NY	Increase or decrease in AADT	18,742	19,440	19,860	19,932	20,465	20,391	21,006	No		20,273	No	
			Increase or decrease in daily number of trucks	2,257	2,423	2,820	3,479	4,116	3,045	432			2,433		

EA CHAPTER	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
				A	B	C	D	E	F	G					
			Potential adverse air quality effects from truck diversions	No	No	No	No	No	No	No		Upper Manhattan and the Bronx, when electric buses are received in MTA's next major procurement of battery electric buses, which began in late 2022. This independent effort by MTA NYCT is anticipated to provide air quality benefits to the environmental justice communities in the Bronx.	No		

OVERALL PROJECT ENHANCEMENT. The Project Sponsors commit to ongoing monitoring and reporting of potential effects of the Project, including for example, traffic entering the CBD, vehicle-miles traveled in the CBD; transit ridership from providers across the region; bus speeds within the CBD; air quality and emissions trends; parking; and Project revenue. Data will be collected in advance and after implementation of the Project. A formal report on the effects of the Project will be issued one year after implementation and then every two years. In addition, a reporting website will make data, analysis, and visualizations available in open data format to the greatest extent practicable. Updates will be provided on at least a bi-annual basis as data becomes available and analysis is completed. This data will also be used to support an adaptive management approach to monitoring the efficacy of mitigation, and adjustments as warranted.

11 Energy

Chapter 11 of the Final EA evaluated the effects of the CBD Tolling Alternative on energy use during operation and construction. This section evaluates the effects of the adopted toll structure on energy demand.

METHODOLOGY

Final EA Methodology

The Final EA evaluated the potential effects of the Project on the following elements:

- **Roadway energy:** Analyzed using the same methodology, assumptions and model as the regional air quality analysis documented in Chapter 10 of the Final EA (Tolling Scenario A, for the 12-county study area, using the USEPA's then-current emissions model, MOVES2014b). The analysis evaluated Tolling Scenario A because that scenario was predicted to have the smallest reduction in VMT. Using that scenario presents the smallest regional energy benefit; other tolling scenarios would have a larger benefit.
- **Server and systems energy:** Energy required to power monitoring and tolling equipment, including network detection systems, and servers that process the data collected by the network detection systems.
- **Construction energy:** Calculated based on the construction cost, using the NYSDOT construction cost calculation procedures to quantify energy use.

Reevaluation Methodology

- **Roadway energy:** Consistent with the approach for the Final EA, the energy analysis for the reevaluation used the same methodology, assumptions, and model that were used for the reevaluation of air quality. The reevaluation of air quality for the adopted toll structure was of the 12-county study area, using USEPA's current emissions model (MOVES3.1). (See the section on air quality for further information about the models used for the reevaluation.)
- **Server, systems and construction energy:** There are no changes to the power requirements or construction costs of the Project with the adopted toll structure and therefore no further analysis needed.

ANALYSIS AND FINDINGS

Like Final EA Tolling Scenario A, the adopted toll structure would also result in a reduction in VMT in the 12-county study area and a reduction in energy use in the region as compared to the No Action Alternative (see **Table 11.1**). Based on this analysis, the conclusions in the Final EA for both 2023 and 2045 remain valid.

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Table 11.1. Percent Change in Energy Demand Vs. No Action Alternative (2023), Final EA and Adopted Toll Structure

FINAL EA ANALYSIS (TOLLING SCENARIO A)	ADOPTED TOLL STRUCTURE
-0.6%	-0.6%

Table 11.2 presents information from the Final EA Table ES-5 summarizing the conclusions related to regional energy use, now modified to include the adopted toll structure.

CONCLUSION

The reevaluation used BPM output related to VMT and vehicle speeds to calculate the effects of the adopted toll structure on energy use. It also used information on construction cost to calculate energy use related to construction activities for the Project. The analysis concluded that, consistent with the conclusions of the Final EA, the adopted toll structure would also result in a reduction in VMT in the 12-county study area and would also therefore reduce energy use as compared to the No Action Alternative. The adopted toll structure would not change the construction activities for the Project from those analyzed in the Final EA. Overall, the conclusions of the Final EA related to energy use remain valid.

Table 11.2. Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
11 – Energy		Reductions in regional energy consumption	12-county study area	Narrative	Reductions in regional VMT would reduce energy consumption							No	**No mitigation needed.** Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects

12 Noise

Chapter 12 of the Final EA presented an evaluation of the potential changes in traffic noise exposure that would result from projected changes in traffic volumes with the implementation of the CBD Tolling Alternative. This section evaluates the effects of the adopted toll structure on noise levels. Additional information is provided in **Appendix 12**.

METHODOLOGY

Final EA Methodology

The methodology used to determine potential noise effects is described starting on page 12-1 of the Final EA, Section 12.1.2, "Methodology." In summary, the Final EA analysis methodology included the following:

1. For consideration of traffic-related noise near bridge and tunnel crossings into the Manhattan CBD, used BPM results related to traffic volumes for the tolling scenario with the highest predicted traffic volumes, Tolling Scenario D, which was the tolling scenario analyzed in the Final EA's traffic assessment (Subchapter 4B).
2. For evaluation of traffic-related noise at local intersections, used the same study areas and traffic volumes analyzed for traffic in the Final EA (Subchapter 4B) for all 102 local traffic intersections within 15 study areas. As with the traffic analysis, this assessment considered Tolling Scenario D at all locations, except in Downtown Brooklyn, where Tolling Scenario C was evaluated.
3. Calculated incremental changes in noise levels for traffic volumes, using Passenger Car Equivalents (PCEs) (using PCEs, 1 auto = 1 PCE; 1 medium truck = 13 PCEs; 1 bus = 18 PCEs; 1 heavy truck = 47 PCEs) for each study area. As with the traffic analysis, the noise analysis used Tolling Scenario D at all locations except Downtown Brooklyn, for which it used Tolling Scenario C.
   - For bridge and tunnel crossings, calculated 24-hour change in A-weighted noise levels (dB(A))[3].
   - For local intersections, calculated peak-period and late-night changes in A-weighted noise levels (dB(A)).
4. For locations where predicted incremental noise levels were greater than 3.0 dB(A), which is the minimum level of potential perceptibility for most humans (see Final EA Chapter 12, Section 12.1.2.1), further analysis would be conducted using FHWA's Traffic Noise Model (TNM) to determine if the increases would be adverse. (No locations had predicted increases above 3.0 dB(A), so no further analysis was necessary.)

[3] As described in the Final EA, Chapter 12, sound is typically measured in units of decibels (dB). The human hearing range is more sensitive to midrange frequencies compared to either low or very high frequencies. This characteristic of the human ear is accounted for by adjusting or weighting the spectrum of the measured sound level for the sensitivity of the human hearing range, referred to as the A-weighted scale, and is denoted by the dB(A) notation.

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Reevaluation Methodology

1. For the same study areas as the Final EA, used the traffic volumes developed for the reevaluation of traffic conditions.
2. Where traffic volumes were higher for the adopted toll structure than evaluated in the Final EA, calculated incremental changes in noise levels for traffic volumes, using same approach as in Final EA.
3. As in the Final EA, for any locations with predicted incremental noise increases greater than 3.0 dB(A), further analysis would be conducted to determine if the increases would be adverse. (As described below, no locations had predicted levels above this level so no further analysis was necessary.)

ANALYSIS AND FINDINGS

The reevaluation concluded that, similar to the Final EA, the adopted toll structure would not result in perceptible noise level increases at bridge and tunnel crossings or local intersections. All projected noise level increases would be below the 3 dB(A) perceptibility level.

- **Bridge and Tunnel Crossings:** The predicted noise level increases with the adopted toll structure are all 0.5 dB(A) or less. Where increases are predicted compared to the No Action Alternative, in most cases they are lower than, or equal to, those studied in the Final EA. The location where the highest noise level increase would occur would shift with the adopted toll structure. With the tolling scenarios evaluated in the Final EA, which were the tolling scenarios predicted to result in the highest traffic volumes in each study area, the highest noise-level increase would occur at the Queens-Midtown Tunnel, with an increase of 2.9 dB(A). With the adopted toll structure, the highest noise-level increase would occur at the Robert F. Kennedy (RFK) Bridge in Manhattan, with an increase of 0.5 dB(A). With both the adopted toll structure and the Final EA tolling scenarios, the maximum noise-level increases would remain below the 3 dB(A) level of perceptibility. **Table 12.1** presents the results of the noise analysis for bridge and tunnel crossings for the Final EA and the adopted toll structure. Additional information is provided in **Appendix 12**.

Table 12.1 - Modified Final EA Table 12-4. Projected Noise-Level Changes (in dB(A)) for CBD Tolling Alternative at Bridge and Tunnel Crossings - Worst-Case Tolling Scenarios D and C – with the Adopted Toll Structure Below

TIME	ED KOCH QUEENSBORO BRIDGE	QUEENS-MIDTOWN TUNNEL (SITE R1)	HUGH L. CAREY TUNNEL (SITE R2)	HOLLAND TUNNEL	LINCOLN TUNNEL	RFK BRIDGE – BRONX	RFK BRIDGE – MANHATTAN	RFK BRIDGE – QUEENS	WILLIAMSBURG BRIDGE	MANHATTAN BRIDGE	BROOKLYN BRIDGE	GEORGE WASHINGTON + HENRY HUDSON BRIDGES	HENRY HUDSON BRIDGE	VERRAZZANO-NARROWS BRIDGE	60TH STREET CROSSINGS	GEORGE WASHINGTON BRIDGE
12 AM	-1.9	**2.9**	1.8	-0.6	-0.3	0.0	0.5	0.0	-2.4	-1.7	-0.4	0.0	-0.1	0.2	-0.6	**0.1**
1 AM	-1.9	**2.9**	1.8	-0.7	-0.4	0.0	0.5	0.0	-2.4	-1.7	-0.3	0.0	-0.1	0.2	-0.6	**0.1**
2 AM	-1.9	**2.9**	**1.9**	-0.7	-0.2	0.0	0.5	0.0	-2.6	-1.7	-0.3	0.0	-0.1	**0.3**	-0.6	**0.1**
3 AM	-1.7	**2.9**	1.8	-0.6	-0.1	0.0	0.4	0.0	-2.9	-1.6	-0.4	0.0	-0.1	0.2	-0.6	**0.1**
4 AM	-1.6	**2.9**	1.8	-0.6	0.0	0.0	0.4	0.0	-3.2	-1.7	-0.4	0.0	-0.1	0.2	-0.6	**0.1**
5 AM	-1.5	2.7	1.8	-0.4	0.2	0.0	0.3	0.0	-3.3	-1.8	-0.5	0.0	-0.1	0.1	-0.6	**0.1**
6 AM	0.0	0.4	1.1	-0.3	-0.2	0.0	0.2	0.0	-0.3	-0.6	-0.2	0.0	0.0	0.0	-0.2	0.0
7 AM	0.0	0.1	0.6	-0.3	-0.2	0.0	0.2	0.0	-0.1	-0.6	-0.2	0.0	0.0	0.1	-0.2	0.0
8 AM	0.0	0.1	0.7	-0.3	-0.2	0.0	0.3	0.0	-0.1	-0.6	-0.1	0.0	0.0	0.1	-0.2	0.0
9 AM	0.0	0.1	1.0	-0.3	-0.2	0.0	0.3	0.0	-0.2	-0.6	-0.1	0.0	0.0	0.1	-0.2	0.0
10 AM	-0.4	0.4	1.1	-0.5	-0.4	0.0	0.3	0.0	-0.7	-1.8	-0.1	0.0	-0.1	0.2	-0.6	**0.1**
11 AM	-0.5	0.5	1.5	-0.5	-0.5	0.0	0.3	0.0	-1.0	-1.8	-0.2	0.0	-0.1	**0.3**	-0.6	**0.1**
12 PM	-0.8	0.7	1.7	-0.6	-0.5	0.0	0.3	0.0	-1.0	-1.7	-0.2	0.0	-0.1	**0.3**	-0.6	**0.1**
1 PM	-0.7	0.4	1.7	-0.6	-0.6	0.0	0.3	0.0	-0.9	-1.7	-0.3	0.0	-0.1	0.2	-0.6	**0.1**
2 PM	-0.7	0.3	1.1	-0.6	-0.6	0.0	0.4	0.0	-0.7	-1.6	-0.3	0.0	-0.1	0.2	-0.6	**0.1**
3 PM	-0.7	0.3	0.7	-0.5	-0.7	0.0	0.4	0.0	-0.5	-1.4	-0.3	0.0	-0.1	0.2	-0.6	**0.1**
4 PM	-0.9	0.7	0.7	-0.3	-0.6	0.0	0.3	0.0	-0.8	-0.4	-0.1	0.0	0.0	0.1	-0.2	0.0
5 PM	-1.0	0.6	0.7	-0.3	-0.6	0.0	0.3	0.0	-0.8	-0.5	-0.1	0.0	0.0	0.1	-0.2	0.0
6 PM	-0.7	0.6	0.8	-0.4	-0.6	0.0	0.3	0.0	-1.0	-0.5	-0.1	0.0	0.0	0.1	-0.2	0.0
7 PM	-0.8	0.8	1.1	-0.4	-0.6	0.0	0.3	0.0	-1.2	-0.5	-0.1	0.0	0.0	0.1	-0.2	0.0
8 PM	-1.5	1.2	1.4	-0.6	-0.3	0.0	**0.6**	0.0	-1.5	-1.7	-0.4	0.0	-0.1	0.2	-0.6	**0.1**
9 PM	-1.6	1.7	1.8	-0.6	-0.3	0.0	0.5	0.0	-2.0	-1.7	-0.4	0.0	-0.1	0.2	-0.6	**0.1**
10 PM	-1.5	2.2	1.8	-0.6	-0.3	0.0	0.5	0.0	-2.2	-1.7	-0.4	0.0	-0.1	0.2	-0.6	**0.1**
11 PM	-1.8	2.8	1.8	-0.7	-0.2	0.0	0.5	0.0	-2.6	-1.7	-0.4	0.0	-0.1	0.2	-0.6	**0.1**

Note: Values shown in **bold** indicate the greatest increase for the location.

Table 12.1 - Modified Final EA Table 12-4. Projected Noise-Level Changes (in dB(A)) for CBD Tolling Alternative at Bridge and Tunnel Crossings - Adopted Toll Structure

TIME	ED KOCH QUEENSBORO BRIDGE	QUEENS-MIDTOWN TUNNEL (SITE R1)	HUGH L. CAREY TUNNEL (SITE R2)	HOLLAND TUNNEL	LINCOLN TUNNEL	RFK BRIDGE – BRONX	RFK BRIDGE – MANHATTAN	RFK BRIDGE – QUEENS	WILLIAMSBURG BRIDGE	MANHATTAN BRIDGE	BROOKLYN BRIDGE	GEORGE WASHINGTON + HENRY HUDSON BRIDGES	HENRY HUDSON BRIDGE	VERRAZZANO-NARROWS BRIDGE	60TH STREET CROSSINGS	GEORGE WASHINGTON BRIDGE
12 AM	0.0	0.2	0.2	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.3	0.0	0.0	-0.6	**0.3**	0.0	0.3
1 AM	0.0	0.2	0.2	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.3	**0.1**	0.0	-0.6	**0.3**	0.0	0.3
2 AM	0.0	0.2	0.1	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.3	0.0	0.0	-0.6	**0.3**	0.0	**0.4**
3 AM	0.2	0.2	0.2	-0.7	-1.1	0.0	0.4	0.0	-0.9	-1.2	0.0	0.0	-0.7	**0.3**	0.0	**0.4**
4 AM	0.3	0.2	0.2	-0.7	-1.1	0.0	0.4	0.0	-0.9	-1.2	-0.1	0.0	-0.9	**0.3**	0.0	**0.4**
5 AM	**0.4**	**0.4**	0.4	-0.6	-1.2	0.0	0.3	0.0	-1.0	-1.3	-0.1	0.0	-1.1	**0.3**	0.0	0.4
6 AM	-1.9	0.2	0.4	-0.4	-0.4	0.0	0.2	0.0	-0.3	-0.8	-0.1	0.0	0.0	0.2	0.0	0.0
7 AM	-1.9	0.2	0.3	-0.5	-0.4	0.0	0.2	0.0	-0.3	-0.7	-0.1	0.0	0.0	0.2	0.0	0.0
8 AM	-1.9	0.2	0.3	-0.5	-0.4	0.0	0.2	0.0	-0.3	-0.7	-0.1	0.0	0.0	0.2	0.0	0.0
9 AM	-1.9	0.1	**0.5**	-0.4	-0.4	0.0	0.2	0.0	-0.3	-0.8	-0.1	0.0	0.0	0.2	0.0	0.0
10 AM	-0.5	-0.1	0.2	-0.7	-0.9	0.0	0.2	0.0	-0.7	-1.2	-0.2	0.0	-0.2	0.2	0.0	0.2
11 AM	-0.5	-0.1	0.2	-0.8	-0.9	0.0	0.2	0.0	-0.8	-1.2	-0.3	0.0	-0.2	0.2	0.0	0.2
12 PM	-0.6	-0.1	0.2	-0.8	-0.9	0.0	0.2	0.0	-0.8	-1.3	-0.2	0.0	-0.2	0.2	0.0	0.3
1 PM	-0.6	-0.1	0.2	-0.8	-0.9	0.0	0.2	0.0	-0.8	-1.3	-0.2	0.0	-0.2	0.2	0.0	0.3
2 PM	-0.6	-0.1	0.2	-0.8	-0.9	0.0	0.2	0.0	-0.8	-1.3	-0.2	0.0	-0.2	0.2	0.0	0.3
3 PM	-0.6	-0.2	0.2	-0.7	-0.9	0.0	0.3	0.0	-0.8	-1.3	-0.2	0.0	-0.2	0.2	0.0	0.3
4 PM	-0.7	-0.1	0.0	-0.4	-0.6	0.0	**0.5**	0.0	-0.5	-1.2	-0.4	0.0	0.0	0.1	0.0	0.1
5 PM	-0.6	-0.1	0.0	-0.4	-0.6	0.0	**0.5**	0.0	-0.5	-1.3	-0.4	0.0	0.0	0.1	0.0	0.1
6 PM	-0.9	0.0	0.0	-0.5	-0.6	0.0	**0.5**	0.0	-0.6	-1.3	-0.4	0.0	0.0	0.1	0.0	0.1
7 PM	-0.9	0.2	0.0	-0.5	-0.6	0.0	**0.5**	0.0	-0.6	-1.3	-0.4	0.0	0.0	0.1	0.0	0.1
8 PM	0.1	0.2	0.2	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.3	0.0	0.0	-0.7	**0.3**	0.0	0.3
9 PM	0.1	0.2	0.2	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.3	0.0	0.0	-0.7	**0.3**	0.0	0.3
10 PM	0.1	0.2	0.2	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.3	0.0	0.0	-0.6	**0.3**	0.0	0.3
11 PM	0.0	0.2	0.2	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.2	-0.1	0.0	-0.6	**0.3**	0.0	0.3

Notes: Values shown in **bold** indicate the greatest increase for the location. Yellow shading indicates an increase from the No Action that is greater than that from the Final EA Tolling Scenarios C and D.
See Final EA Table 12-4 on page 12-9 for values with the CBD Tolling Alternative, Tolling Scenarios C and D.

- **Local Streets:** The location where the highest noise-level increase would occur at traffic intersections would also shift with the adopted toll structure. In the Final EA, this would occur during the midday in Lower Manhattan adjacent to Trinity Place and Edgar Street, with a maximum increase of 2.5 dB(A). With the adopted toll structure, it would occur near the intersection of West 179th Street and Broadway during the AM and midday periods where a maximum increase of 2.8 dB(A) is projected (see **Table 12.2**). The results for all intersections evaluated are summarized in **Appendix 12**. Overall, with both the adopted toll structure and the Final EA tolling scenarios, the maximum noise-level increases would remain below the 3 dB(A) level of perceptibility.

Table 12.2 - Estimated Directional Weighted PCE Noise Level Changes for Adopted Toll Structure, Little Dominican Republic Study Area, West 179th Street at Broadway

APPROACH	MOVEMENT	LANE GROUP	MOVEMENT	AM		MIDDAY		PM	
				PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
NB	NBL	L	Left	3.0	**2.7**	2.5	**2.8**	1.3	2.5
	NBT	T	Through	2.6		2.9		3.1	
SB	SBT	T	Through	3.0	**2.8**	1.9	1.6	1.6	0.9
	SBR	TR	R	2.2		1.1		-0.8	
WB	WBL	TR	Left	3.1	-0.1	1.9	-2.2	2.4	-2.8
	WBT		Through	-1.1		-3.3		-4.0	
	WBR		Right						

Table 12.3 presents information from the Final EA Table ES-5 summarizing the conclusions related to traffic-related noise on bridge and tunnel approaches and at local intersections, now modified to include the adopted toll structure.

CONCLUSION

For the reevaluation, the Project Sponsors used information related to traffic volumes from the BPM to evaluate the adopted toll structure's potential effects on noise levels near bridge and tunnel crossings into the Manhattan CBD and at local intersections where traffic volumes are predicted to increase. The reevaluation used the same methodology as the noise analysis in the Final EA. The analysis demonstrates that the conclusions of the Final EA related to noise remain valid. Projected noise level increases would remain below 3.0 dB(A), as described in the Final EA. Thus, the adopted toll structure would not result in potential adverse effects on ambient noise levels and no mitigation is needed.

Table 12.3 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with Adopted Toll Structure Added

<table>
<tr><th rowspan="2">EA CHAPTER</th><th rowspan="2">TOPIC</th><th rowspan="2">SUMMARY OF EFFECTS</th><th rowspan="2">LOCATION</th><th rowspan="2">DATA SHOWN IN TABLE</th><th colspan="7">FINAL EA TOLLING SCENARIO</th><th rowspan="2">POTENTIAL ADVERSE EFFECT</th><th rowspan="2">MITIGATION AND ENHANCEMENTS</th><th rowspan="2">ADOPTED TOLL STRUCTURE</th><th rowspan="2">POTENTIAL ADVERSE EFFECT</th><th rowspan="2">MITIGATION AND ENHANCEMENTS</th></tr>
<tr><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th></tr>
<tr><td rowspan="2">12 – Noise</td><td rowspan="2"></td><td rowspan="2">Imperceptible increases or decreases in noise levels resulting from changes in traffic volumes</td><td>Bridge and tunnel crossings</td><td>Narrative</td><td colspan="7">The maximum noise level increases (2.9 dB(A)), which were predicted adjacent to the Queens-Midtown Tunnel in Tolling Scenario D, would not be perceptible.</td><td>No</td><td rowspan="2">No mitigation needed. No adverse effects

Enhancement
Refer to the overall enhancement on monitoring at the end of this table.</td><td>The maximum predicted noise level increase (0.5 dB(A)) at RFK Bridge in Manhattan, would not be perceptible.</td><td>No</td><td rowspan="2">No mitigation needed. No adverse effects. The Project Sponsors are maintaining their commitment to mplement the enhancement measures identified in the Final EA and FONSI.</td></tr>
<tr><td>Local streets</td><td>Narrative</td><td colspan="7">Tolling Scenario C was used to assess noise level changes in Downtown Brooklyn, Tolling Scenario D was used at all other locations assessed. The maximum predicted noise level increases (2.5 dB(A)), which were at Trinity Place and Edgar Street, would not be perceptible. There was no predicted increase in noise levels in the Downtown Brooklyn locations.</td><td>No</td><td>The maximum predicted noise level increases (2.8 dB(A)), at W. 179th St / Broadway, would not be perceptible.</td><td>No</td></tr>
</table>

OVERALL PROJECT ENHANCEMENT. The Project Sponsors commit to ongoing monitoring and reporting of potential effects of the Project, including for example, traffic entering the CBD, vehicle-miles traveled in the CBD; transit ridership from providers across the region; bus speeds within the CBD; air quality and emissions trends; parking; and Project revenue. Data will be collected in advance and after implementation of the Project. A formal report on the effects of the Project will be issued one year after implementation and then every two years. In addition, a reporting website will make data, analysis, and visualizations available in open data format to the greatest extent practicable. Updates will be provided on at least a bi-annual basis as data becomes available and analysis is completed. This data will also be used to support an adaptive management approach to monitoring the efficacy of mitigation, and adjustments as warranted.

Other Analyses: Natural Resources (EA Chapter 13), Hazardous Wastes (EA Chapter 14), Construction Effects (EA Chapter 15)

Chapters 13, 14, and 15 of the Final EA explored the effects on three analysis areas—natural resources, hazardous wastes, and construction effects, respectively—e from the installation of the tolling infrastructure and tolling system equipment that will be used for the CBD Tolling Program. The adopted toll structure will use the same tolling infrastructure and tolling system equipment described and evaluated in the Final EA. Construction for the Project began in July 2023. The construction of tolling infrastructure and tolling system equipment is now complete. Power and communications are nearing completion and testing is under way. With the same infrastructure and equipment and construction activities as evaluated in the Final EA, the Final EA remains valid for these analysis areas and no further analysis is needed.

Tables 13.1, 14.1, and 15.1 present information from the Final EA Table ES-5 summarizing the conclusions related to these topics, now modified to include the adopted toll structure.

CONCLUSION

The Final EA considered the effects from installation of tolling infrastructure and tolling system equipment related to natural resources, hazardous wastes, and construction effects. The adopted toll structure would have the same construction activities and the same permanent tolling infrastructure and tolling system equipment described and evaluated in the Final EA. Consequently, for these areas, the conclusions of the Final EA remain valid, and no additional construction commitments are needed. The Project Sponsors will implement the mitigation commitments described in the Final EA.

Table 13.1. Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
13 – Natural Resources		Construction activities to install tolling infrastructure near natural resources	Sites of tolling infrastructure and tolling system equipment	Narrative	No effects on surface waters, wetlands, or floodplains. Potential effects on stormwater and ecological resources will be managed through construction commitments. The Project is consistent with coastal zone policies.							No	Refer to **Chapter 13, "Natural Resources,"** for a listing of construction commitments to avoid, minimize, or mitigate potential negative effects.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	The Project Sponsors will implement the construction commitments described in the Final EA.

Table 14.1. Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
14 – Hazardous Waste		Potential for disturbance of existing contaminated or hazardous materials during construction	Sites of tolling infrastructure and tolling system equipment	Narrative	Soil disturbance during construction and the potential alteration, removal, or disturbance of existing roadway infrastructure and utilities that could contain asbestos-containing materials, lead-based paint, or other hazardous substances. Potential effects will be managed through construction commitments.							No	Refer to **Chapter 14, "Asbestos-Containing Materials, Lead-Based Paint, Hazardous Wastes, and Contaminated Materials,"** for a listing of construction commitments to avoid, minimize, or mitigate potential negative effects.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	The Project Sponsors will implement the construction commitments described in the Final EA.

Table 15.1. Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
15 – Construction Effects		Potential disruption related to construction for installation of tolling infrastructure	Sites of tolling infrastructure and tolling system equipment	Narrative	Temporary disruptions to traffic and pedestrian patterns, and noise from construction activities, with a duration of less than one year overall, and approximately two weeks at any given location. These effects will be managed through construction commitments.							No	Refer to **Chapter 15, "Construction Effects,"** for a listing of construction commitments to avoid, minimize, or mitigate potential negative effects.	Same as Final EA. No change proposed to construction for new tolling infrastructure, tolling system equipment, or signage.	No	The Project Sponsors will implement the construction commitments described in the Final EA.

16 Summary of Effects

Chapter 16 of the Final EA provides a summary of the direct, indirect, and cumulative effects of the CBD Tolling Alternative as discussed in the previous chapters of the Final EA. The reevaluation of the adopted toll structure presented in other sections of this document demonstrates that, with the adopted toll structure, the conclusions in the Final EA remain valid and there is no need for additional mitigation. Consequently, the summary of direct, indirect, and cumulative effects also remains valid.

Table 1.1 in **Section 1** of this reevaluation provides a summary of the effects of the adopted toll structure in comparison to the effects presented in the Final EA. The table is a re-creation of the table that was provided in the Final EA as Table ES-5 and Table 16-1, now modified to include the adopted toll structure.

17 Environmental Justice

Chapter 17 of the Final EA presented an evaluation of the CBD Tolling Alternative's potential for disproportionately high and adverse effects to environmental justice populations, including effects on local communities and effects related to regional mobility. This section presents a reevaluation of that topic for the adopted toll structure.

METHODOLOGY

Final EA Methodology

The methodology used to determine potential effects on environmental justice populations is described starting on page 17-2 of the Final EA, Section 17.3, "Methodology." As described in that section, the environmental justice analysis evaluated two types of effects of the CBD Tolling Program:

- **Local (Neighborhood) Effects:** The Final EA evaluated the effects on neighborhoods related to changes in traffic patterns and the resulting effects in terms of traffic congestion, air emissions, and noise; it then assessed whether any such effects would occur disproportionately to environmental justice populations. This included a supplemental analysis for the Final EA of increases or decreases in traffic and truck traffic as a result of traffic diversions in communities already highly burdened by pre-existing air pollution and chronic diseases. For the local (neighborhood) effects, the Final EA used a 10-county study area where localized effects (such as changes in traffic volumes, air emissions, or noise) would occur as a result of the Project.
- **Regional Effects:** The Final EA considered how implementation of the CBD Tolling Alternative would affect the regional population in terms of increased costs (tolls), changes in trip time, and changes in transit conditions, and whether any effects would occur disproportionately to environmental justice populations. For regional effects, the Final EA evaluated the 28-county regional study area, which is the main catchment area for trips to and from the Manhattan CBD and the area where changes in travel patterns and mobility would occur.

Reevaluation Methodology

The re-evaluation used the same methodology as the Final EA in considering the local (neighborhood) effects and regional effects of the adopted toll structure.

ANALYSIS AND FINDINGS: LOCAL (NEIGHBORHOOD) EFFECTS

The Final EA considered a range of issues that had the potential to result in local, neighborhood effects:

- Increased traffic congestion on highway segments
- Changes in traffic conditions at local intersections

- Traffic-related effects on noise
- Increases to transit ridership
- Changes in passenger flows at transit stations
- Changes in pedestrian circulation near transit hubs
- Potential for indirect displacement
- Potential effects on the costs of goods
- Traffic-related effects on air quality (including a supplemental analysis for the Final EA of Project effects of traffic and truck traffic on communities with associated high pre-existing air pollutant and health burdens)

The Final EA concluded that, with the implementation of mitigation, the CBD Tolling Alternative would not result in disproportionately high and adverse effects on environmental justice populations in those topic areas.

The reevaluation of each of the topic areas above shows that, with implementation of mitigation, the effects of the adopted toll structure fall within the range of effects evaluated in the Final EA and the conclusions of the Final EA remain valid.

ANALYSIS AND FINDINGS: REGIONAL

Low-Income Drivers

As documented in the Final EA, a total of 16,100 low-income workers drive to the Manhattan CBD for work, based on Census Transportation Planning Program (CTPP) data. The EA published in August 2022 concluded that the increased cost to drivers with the new CBD toll would disproportionately affect low-income drivers who currently drive to the Manhattan CBD and do not have reasonable alternative transportation modes available, because the cost of the toll would consume a larger percentage of their available income. To avoid that potential disproportionate adverse effect, in the Final EA, the Project Sponsors committed to a program of mitigation measures for low-income frequent drivers. With further analysis of the population affected (as documented in Appendix 17E, "Approach to Mitigating the Effect of CBD Tolls on Low-Income Frequent Drivers"), and the addition of mitigation measures committed to by the Project Sponsors (see **Table 17.1** below), the Final EA concluded there would not be a disproportionately high and adverse effect on low-income drivers.

As shown in **Table 17.1**, the adopted toll structure includes passenger toll rates within the range evaluated in the Final EA and enhances the mitigation commitments related to low-income drivers, giving a deeper discount than that committed to in the Final EA.[4] Therefore, the conclusions of the Final EA remain valid for low-income drivers.

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[4] In the Final EA, the Project Sponsors committed $47.5 million over 5 years for Low-Income Discount Plan for low-income frequent drivers; with the adopted toll structure, the Project Sponsors will commit $82 million over 5 years to the deeper discount.

Minority Drivers

The Final EA determined that for minority drivers who have no reasonable alternative mode for reaching the Manhattan CBD other than private vehicle, the cost of the new CBD toll would have the same effect as experienced by the general population and no disproportionately high and adverse effect would occur.

The Final EA also included a separate analysis of the Project's effect on taxi and FHV drivers, discussed below.

Table 17.1 - Mitigation Commitments for Low-Income Drivers in Final EA and Adopted Toll Structure

FINAL EA	ADOPTED TOLL STRUCTURE
Toll Rates Evaluated	
Auto toll rates evaluated: $9 - $23 peak; $7 - $17 off-peak; $5 - $12 overnight	Auto toll rates within the range of the Final EA: $15 peak; $3.75 overnight
Mitigation Commitments	
Tax credit for CBD tolls paid by residents of the Manhattan CBD whose New York adjusted gross income for the taxable year is less than $60,000.	Commitment remains, not specific to the adopted toll structure
Information related to the tax credit to be posted on the Project website, with a link to the appropriate location on the NYS DTF website.	Commitment remains, not specific to the adopted toll structure
Elimination of the $10 E-ZPass tag deposit fee for customers without credit card backup.	Commitment remains, not specific to the adopted toll structure
Enhanced promotion of existing E-ZPass payment and plan options, including the ability for drivers to pay per trip (rather than a pre-load balance), refill their accounts with cash at participating retail locations, and discount plans already in place.	Commitment remains, not specific to the adopted toll structure
Outreach and education on eligibility for existing discounted transit fare products and programs.	Commitment remains, not specific to the adopted toll structure
Establishment of an Environmental Justice Community Group that will meet on a quarterly basis, with the first meeting prior to Project implementation, to share updated data and analysis and listen to potential concerns.	Commitment remains, not specific to the adopted toll structure
An overnight toll rate that is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m. in the final CBD tolling structure, which will benefit low-income drivers traveling during this time. In the Final EA, a total of $30 million was allocated over 5 years for this discounted overnight toll.	The adopted toll structure includes an overnight toll discounted further than the mitigation commitment: 9 PM – 5 AM weekdays, 9 PM – 9 AM weekends 25% of peak toll rate, overnight EZP rates as follows: Auto - $3.75 Small truck - $6.00 Large truck - $9.00 A total of $123 million will be allocated over 5 years for this discounted overnight toll.
For the first five years of the Project, the final tolling structure to include a discounted toll rate for low-income frequent drivers who have either a Federal adjusted gross income reported on their income tax return for the prior calendar year	Low-Income Discount Plan included as part of the adopted toll structure, but discounted further than the mitigation commitment: ▪ A 50 percent discount on the peak toll rate after the first 10 trips each month.

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in the amount of no more than $50,000 or proof of enrollment in a qualifying government-provided income-based program: ▪ A 25 percent discount on the full CBD E-ZPass toll rate for the applicable time of day after the first 10 trips in each calendar month (not including the overnight period, which will already be deeply discounted). ▪ Results in a discounted base auto toll rate of $7 - $17, depending on the tolling scenario. ▪ In the Final EA, a total $47.5 million was allocated for this discount over 5 years	▪ Results in a discounted base auto toll rate of $7.50. ▪ A total of $82 million will be allocated over 5 years for this increased discount.

Minority Taxi and FHV Drivers

The EA published in August 2022 identified potential adverse effects to taxi and/or FHV drivers in New City in tolling scenarios that charge their vehicles more than one passenger-vehicle toll per day.[5] The adverse effect would be related to the cost of the new CBD toll and the reduction of VMT for taxis and/or FHVs, which would result in a decrease in revenues that could lead to losses in employment. The Final EA assumed this adverse effect would occur predominantly to a minority population and therefore would be a disproportionately high and adverse effect without mitigation.

To avoid this potential disproportionate adverse effect, the Project Sponsors committed to a toll structure that would cap tolls for New York City taxis and FHVs at one passenger toll per day. With this mitigation, the Final EA concluded that no disproportionately high and adverse effect would occur to taxi and FHV drivers.

This reevaluation considers the effects of the adopted toll structure, in which the per-trip toll rate for taxis will be $1.25 and the rate for FHVs will be $2.50. Based on New York City Taxi and Limousine Commission 2023 information on the average number of trips per day for taxis and FHVs (12 trips for taxis and 6 for FHVs), these pre-trip rates are equivalent to the amount of the once-per-day toll for passenger vehicles, which will be $15.00. As described in **Table 17.2**, BPM model results for the adopted toll structure show that the reduction in VMT for taxis and FHVs in New York City (1.6 percent) will be within the range reported in the Final EA that would avoid an adverse effect on employment for drivers of taxis and FHVs, for tolling scenarios that limited tolls for taxis and FHVs to once per day.

Therefore, the adopted toll structure is consistent with the commitments in the Final EA related to taxi and FHV drivers. The conclusions of the Final EA remain valid.

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5 As noted in the Final EA on page 17-23, based on data from the New York City Taxi and Limousine Commission about the countries of origin of taxi and FHV drivers in New York City, for purposes of this analysis, New York City taxi and FHV drivers are identified as a minority population.

Table 17.2 - Modified Final EA Table 17-14. Change in Taxi/For-Hire Daily Vehicle-Miles Traveled in New York City vs. No Action Alternative - with the Adopted Toll Structure Added

GEOGRAPHIC AREA	FINAL EA TOLLING SCENARIOS								
	A	B	C	D	E	F	G	MODIFIED G	ADOPTED TOLL STRUCTURE
Taxi Toll Policy	All Entries	Once per Day	Exempt	All Entries	Exempt	Once per Day	All Entries	Once per Day	$1.25 per trip toll on trips to, within, or from the CBD (see note)
FHV Toll Policy			Up to 3 Times Daily		Up to 3 Times Daily				$2.50 per trip toll on trips to, within, or from the CBD (see note)
Peak Toll Rate	$9	$10	$14	$19	$23	$23	$12	$12	$15
Bronx County	-8,392 (-3.1%)	-5,717 (-2.1%)	-6,426 (-2.4%)	-9,346 (-3.4%)	-3,991 (-1.5%)	-1,959 (-0.7%)	-7,831 (-2.9%)	-1,621 (-0.6%)	+16 (+0.0%)
Kings County (Brooklyn)	-33,855 (-9.1%)	-20,648 (-5.5%)	-10,247 (-2.7%)	-37,923 (-10.2%)	-27,854 (-7.5%)	-7,095 (-1.9%)	-39,183 (-10.5%)	-22,971 (-6.2%)	-5,857 (-1.6%)
New York County (Manhattan)	-77,843 (-10.9%)	-19,553 (-2.7%)	-51,989 (-7.3%)	-119,349 (-16.7%)	-73,223 (-10.2%)	-17,076 (-2.4%)	-87,944 (-12.3%)	-27,897 (-3.9%)	-25.105 (-4.9%)
Inside Manhattan CBD	-21,498 (-6.6%)	+15,020 (+4.6%)	-11,371 (-3.5%)	-54,476 (-16.8%)	-25,621 (-7.9%)	+4,962 (+1.5%)	-27,757 (-8.6%)	+10,203 (+3.1%)	-904 (-0.3%)
Outside Manhattan CBD	-56,345 (-14.4%)	-34,573 (-8.8%)	-40,618 (-10.4%)	-64,873 (-16.6%)	-47,602 (-12.2%)	-22,038 (-5.6%)	-60,187 (-15.4%)	-38,100 (-9.7%)	-34,201 (-8.7%)
Queens County	-3,873 (-0.4%)	+21,258 (+2.0%)	-10,804 (-1.0%)	-47,911 (-4.4%)	-19,342 (-1.8%)	+4,979 (+0.5%)	-7,812 (-0.7%)	+14,644 (+1.3%)	+5,311 (+0.5%)
Richmond County (Staten Island)	-4,884 (-8.6%)	-5,071 (-8.9%)	-4,940 (-8.7%)	-4,539 (-8.0%)	-6,002 (-10.5%)	-4,370 (-7.7%)	-4,917 (-8.6%)	-5,636 (-9.9%)	-4,405 (-7.7%)
NEW YORK CITY TOTAL	**-128,847 (-5.1%)**	**-29,731 (-1.2%)**	**-84,406 (-3.4%)**	**-219,068 (-8.8%)**	**-130,412 (-5.2%)**	**-25,521 (-1.0%)**	**-147,687 (-5.9%)**	**-43,481 (-1.7%)**	**-40,040 (-1.6%)**

Notes: Projections include VMT only during fares and do not include cruising without passenger(s), to reflect effects on demand and revenues.
Tolling Scenario Modified G was not included in Final EA Table 17-14, but was discussed in the narrative on the following page, Final EA page 17-54.
Yellow shading in the table highlights the Final EA tolling scenarios that limited tolls on taxis and FHVs to one passenger-vehicle toll per day.
The per-trip tolls in the adopted toll structure would be equivalent to the auto peak rate of $15 (based on 2023 TLC data for average trips per vehicle per day: for taxis the average number of trips with passengers to/from/within the CBD is 12, and for FHVs it is 6).

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ANALYSIS AND FINDINGS: LOCAL (NEIGHBORHOOD) EFFECTS RELATED TO TRAFFIC DIVERSIONS

For the Final EA, the Project Sponsors conducted additional analysis of the potential effects of traffic diversions resulting from the CBD Tolling Alternative on environmental justice communities that are already highly burdened by preexisting air pollution and chronic diseases and could see increased traffic. The analysis concluded that in some environmental justice census tracts that have high pre-existing pollutant burdens or chronic disease burdens where the CBD Tolling Alternative would increase traffic, these traffic increases have the potential to increase pollutant burdens and could contribute to chronic disease burdens and therefore could constitute a potential adverse effect on these particularly vulnerable environmental justice populations. The specific census tracts that would experience increased or decreased traffic changed slightly depending on the tolling scenario, but the affected communities remain largely the same. The effects would vary in magnitude depending on the additional volume of traffic and the extent of pre-existing pollutant and chronic disease burdens.

As in the Final EA, under the adopted toll structure the Project Sponsors committed to implement mitigation measures related to potential Project-related traffic diversions, related air pollutants, and associated health effects to benefit environmental justice communities that are already highly burdened by pre-existing air pollution and/or chronic diseases, relative to national percentiles. Mitigation measures will include regional measures, which will reduce truck diversions and reduce emissions. These regional measures will benefit communities with census tracts where individuals experience either pre-existing pollutant burdens or chronic-disease burdens at or above the 90th percentile among all communities in the United States, and where the Project could increase exposure to truck traffic due to traffic diversions as well as related pollutants and associated health effects.

Mitigation measures also include place-based measures to reduce emissions and improve air quality and/or health outcomes in areas with the greatest pre-existing burdens that would also be affected by Project-related diversions. As in the Final EA, under the adopted toll structure, the areas identified for place-based mitigation are the environmental justice census tracts where individuals experience at least one pre-existing pollutant burden and at least one pre-existing chronic disease burden at or above the 90th percentile, nationally, and where truck proximity could increase as a result of the Project. In addition, in the Final EA and under the adopted toll structure, results from analysis of non-truck traffic effects drew attention to traffic increases on the FDR Drive adjacent to the Lower Manhattan and Lower East Side communities. Additional modeling indicated that some of these increases could be mitigated by ensuring that vehicles traveling to Manhattan on the Brooklyn Bridge and then southbound on the FDR Drive by first going north, then exiting from the FDR Drive to East Houston Street, and then immediately turn left to head back south on the FDR Drive, would be tolled. In addition to the traffic monitoring plan for this area related to potential adverse effects on traffic, the adopted toll structure does not make this a free movement.

Additional detail on these mitigation measures and how they will be allocated can be found in the sections "**Regional and Place-Based Mitigation**" and "**Benefits and Allocation of Funding for Mitigation Measures**," below.

To fund these mitigation measures, the Project Sponsors committed to $155 million over 5 years in the Final EA. Under the adopted toll structure, the Project Sponsors will commit $248 million over 5 years by deepening the overnight toll discount and expanding the hours in which the discount will be offered. [6] **Table 17-13** shows the mitigation measures committed to by the Project Sponsors.

An adaptive management approach will be used, including monitoring the efficacy of mitigation, ongoing stakeholder consultation, and making adjustments as warranted. As committed to in the Final EA, TBTA has begun work with New York City's Department of Health and Mental Hygiene (NYC DOHMH) to expand New York City's existing air-quality monitoring network and is gathering readings from monitoring sites in Bergen and Hudson Counties, NJ through USEPA's Air Quality System. The monitoring effort will allow the Project Sponsors to determine whether any changes in air pollution can be attributed to changes in traffic occurring after implementation of the Project. As part of adaptive management, the toll schedule adopted by the TBTA Board allows for a percentage increase/decrease of up to 10 percent on CBD tolls and credits to respond to monitoring results if appropriate.

The analysis of effects related to traffic diversions on highly burdened environmental justice communities evaluated whether non-truck traffic proximity and truck traffic proximity could increase as a result of the Project in each census tract within the local study area. The analysis also evaluated whether truck traffic proximity could decrease. As defined in the Final EA Appendix 17D, Section 17D.4 (page 17D-14), highway non-truck and highway truck traffic proximity are measures of the amount of daily highway traffic near the population center within each census tract. Highway truck traffic proximity was a particular focus, because diesel emissions have a higher level of particulate matter, which is associated with adverse health outcomes, and because Project-related diversions would mainly occur on highways.[7]

Census tracts are, as defined by the U.S. Census Bureau, statistical subdivisions of a county or statistically equivalent entity. Communities contain multiple census tracts. As described in Final EA Appendix 17D, communities are defined as either municipalities (outside New York City) or neighborhoods (within New York City).8 Within the five New York City counties, these neighborhoods were identified using the United Hospital Fund (UHF) neighborhood definitions—a geography designed for health research.9 Environmental justice census tracts are census tracts where a greater proportion of the population is minority and/or low-income, as identified using the methodology described in Final EA Chapter 17, Section 17.5.1 (page 17-8).

Environmental justice census tracts where individuals experience at least one pre-existing pollutant burden or at least one pre-existing chronic disease burden at or above the 90th percentile, nationally, and where truck proximity could increase as a result of the Project, were identified as "90 or 90" census tracts. Environmental justice census tracts where individuals experience at least one pre-existing pollutant burden

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6 The $248 million committed is in addition to $5 million allocated for mitigation and enhancement measures related to monitoring across other topics, along with $82 million for the low-income toll discount to be implemented.

7 See Final EA, Appendix 17D, Section 17D-6.1.1 on page 17D-43 and 17D-6.1.3 on page 17D-44 for an explanation of how truck traffic proximity is calculated.

8 See Final EA Appendix 17D, Section 17D-6.1.4, p. 17D-50.

9 See Final EA, Appendix 17D, Section 17D-5.5.2, page 17D-29, Footnote 68 for more information on UHF neighborhoods.

and at least one pre-existing chronic disease burden at or above the 90th percentile, nationally, and where truck proximity could increase as a result of the Project were identified as "90 and 90" census tracts.[10]

As noted in Final EA, Appendix 17D, Section 17D-6.1.2, truck diversions would occur in every tolling scenario, but Tolling Scenario E had the maximum predicted truck diversions by volume for all census tracts in the 10-county environmental justice study area.[11] For this reason, the Project Sponsors presented potential truck-traffic proximity under Tolling Scenario E in the Final EA. The Project Sponsors also presented potential non-truck traffic proximity under Tolling Scenario E, as well as Tolling Scenario G; as noted in Section 17D-6.1.5 of Final EA Appendix 17D, modeled traffic results from the BPM indicated that Tolling Scenario G was the scenario with the largest potential increases in non-truck traffic across the environmental justice-designated census tracts in the 10-county environmental justice study area.[12] Any community with one or more environmental-justice-designated census tract meeting the "90 or 90" or "90 and 90" criteria was identified in the Final EA as a community that is already overburdened by pre-existing air pollution and chronic diseases. The Project Sponsors committed to a package of regional (for "90 or 90" communities) and place-based (for "90 and 90" communities) measures to mitigate potential adverse effects on environmental justice populations.

The same methodology described in Appendix 17D of the Final EA, "Technical Memorandum: Considerations for Environmental Justice Communities with Existing Pollution or Health Burdens," was used to evaluate the adopted toll structure for potential effects and identify the relevant "90 or 90" and "90 and 90" communities.

The overall findings for the adopted toll structure are described in the following paragraphs.

Truck Traffic

- **Potential Project Truck Diversion Effects:** The adopted toll structure would have more balanced potential diversion effects when comparing environmental-justice-designated and non-environmental-justice-designated census tracts (as illustrated in **Table 17.3**, which is Final EA Table 17D-11 with the adopted toll structure added). As shown in the table, for the 434 census tracts in the 10-county environmental justice study area that are within 300 meters of a highway, the Final EA predicted that 50 percent of the environmental justice-designated census tracts and 41 percent of the non-environmental justice-designated census tracts would have an increase in truck traffic proximity (a total of 205 tracts). **Table 17.3** also shows that 18 percent of environmental justice-designated census tracts and 19 percent of the non-environmental justice-designated census tracts would have a decrease in truck traffic proximity (a total of 79 tracts). For the adopted toll structure, the number of census tracts affected by an increase in truck traffic proximity would be slightly higher (209 tracts), but the results would be more evenly distributed between non-environmental justice-designated tracts (47 percent) and environmental justice-designated tracts (49 percent) and the number of affected environmental

10 Note that, by these definitions from the Final EA, "90 and 90" census tracts are also "90 or 90" census tracts; the former is a subset of the latter.
11 Final EA Appendix 17D, page. 17D-43.
12 Final EA Appendix 17D, page 17D-60.

justice-designated tracts would be lower than with the Final EA (151 rather than 154). The number of census tracts having a decrease in truck traffic proximity would be slightly lower (74 tracts); a greater number of environmental justice-designated census tracts would have a decrease (59 tracts rather than 56 tracts), and a smaller number of non-environmental justice-designated tracts would have a decrease (15 tracts rather than 23 tracts).

- **Intensity of Potential Truck-Traffic Increases**: The adopted toll structure would have lower intensities of truck-traffic proximity increases in "90 and 90" and "90 or 90" environmental justice-designated census tracts. This is illustrated in **Table 17.4**, which provides the minimum, average, and maximum increase in truck-traffic proximity for the "90 and 90" and "90 or 90" environmental justice-designated census tracts for Final EA Tolling Scenario E and the adopted toll structure. As described in Final EA Appendix 17D, "the change in truck traffic proximity for each environmental justice census tract is equal to the difference between truck AADT on freeways and interstates in the CBD Tolling Alternative and the No Build Alternative, as forecasted in the BPM, within 300 meters (approximately 1,000 feet) of the population-weighted census tract centroid, divided by distance in meters."[13] For both types of environmental justice-designated census tracts, the average increase and maximum increase in truck-traffic proximity that would occur with the adopted toll structure would be smaller than with Final EA Tolling Scenario E. **Figure 17.1** compares the intensity of potential truck traffic proximity decreases in Tolling Scenario E and the adopted toll structure among "90 or 90" environmental justice census tracts; **Figure 17.2** provides the same comparison but for the intensity of potential truck traffic proximity increases.

[13] See Final EA, Appendix 17D, Section 17D-6.1.1, page 17D-43. For further description of traffic proximity in US EPA's EJScreen, calculation methods, and how to interpret the measure, see Final EA, Appendix 17D, Section 17D-4, pp. 17D-14 and 17D-15, Section 17D-6.1.1, p. 17D-43, Sections 17D-6.1.3 and 17D-6.1.4, p. 17D-44.

Table 17.3 - Modified Final EA Table 17D-11. Summary of Project Effects on Truck Traffic Proximity (Tolling Scenario E) - With the Adopted Toll Structure Added

TYPE OF HIGHWAY TRUCK TRAFFIC PROXIMITY CHANGES RESULTING FROM THE PROJECT	NUMBER OF TRACTS WITH PRE-EXISTING AIR POLLUTANT OR CHRONIC DISEASE BURDENS WITHIN 300 METERS OF A HIGHWAY						% OF COMMUNITY TYPE AFFECTED			
	FINAL EA SCENARIO E			ADOPTED TOLL STRUCTURE			FINAL EA SCENARIO E		ADOPTED TOLL STRUCTURE	
	NON-ENVIRON-MENTAL JUSTICE TRACTS	ENVIRON-MENTAL JUSTICE TRACTS	TOTAL TRACTS	NON-ENVIRON-MENTAL JUSTICE TRACTS	ENVIRON-MENTAL JUSTICE TRACTS	TOTAL TRACTS	NON-ENVIRON-MENTAL JUSTICE TRACTS	ENVIRON-MENTAL JUSTICE TRACTS	NON-ENVIRON-MENTAL JUSTICE TRACTS	ENVIRON-MENTAL JUSTICE TRACTS
Tracts with Decrease in Truck Traffic Proximity	23	56	79	15	59	74	19%	18%	12%	19%
Tracts with No Change in Truck Traffic Proximity	49	101	150	50	101	151	40%	32%	41%	32%
Tracts with Increase in Truck Traffic Proximity	51	154	205	58	151	209	41%	50%	47%	49%
Total Tracts	123	311	434	123	311	434	100%	100%	100%	100%

Source: U.S. Census Bureau, ACS 2015-2019 5-Year Estimates; USEPA NATA 2017 and Agency Air Quality System 2018 via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

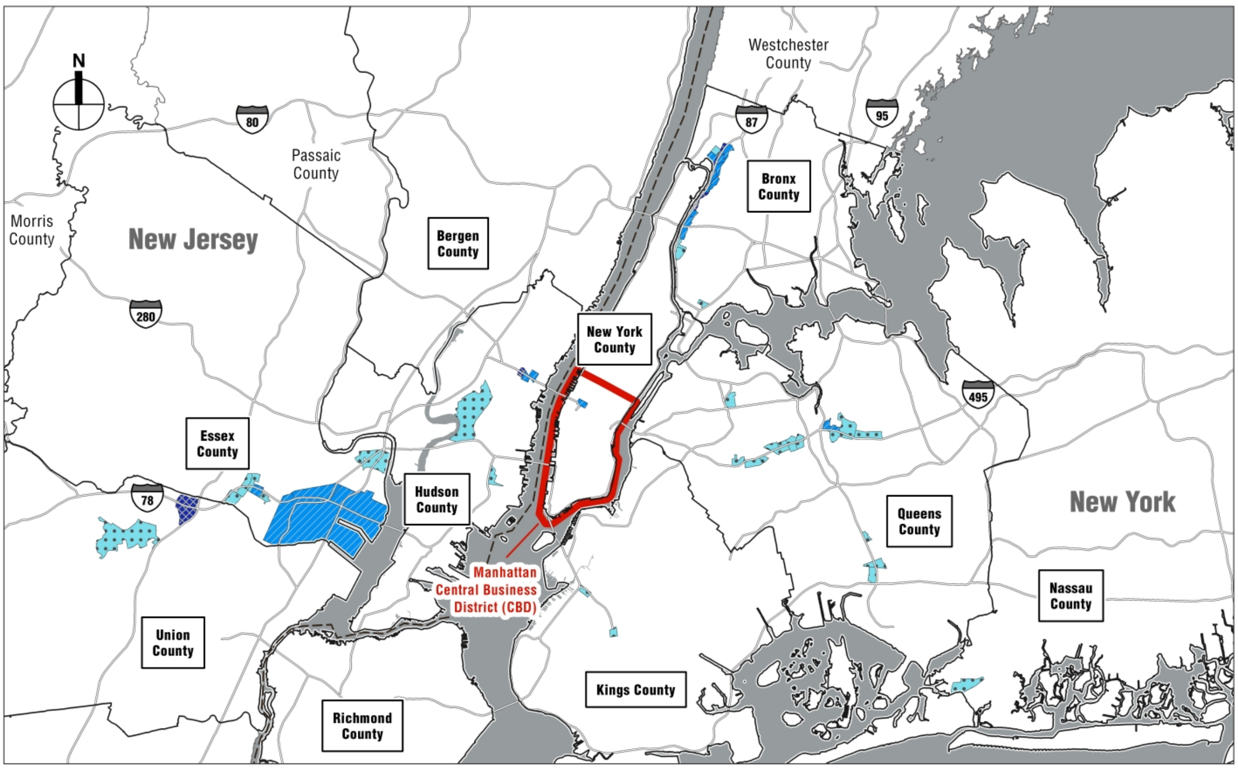
Table 17.4 - Range of Truck-Traffic Proximity Increases for Environmental Justice-Designated Overburdened Tracts, Final EA and Adopted Toll Structure

TOPIC	LOCATION	DATA SHOWN IN TABLE	TRUCK TRAFFIC PROXIMITY CHANGE (DAILY TRUCKS PER METER DISTANCE)	
			FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE
Increases in truck traffic proximity, as a result of traffic diversions, in communities already overburdened by preexisting air pollution and chronic diseases	90 AND 90 Environmental Justice-Designated Census Tracts (Place-Based)	Minimum Increase	0.21	0.13
		Average Increase	6.80	4.85
		Maximum Increase	122.71	72.13
	90 OR 90 Environmental Justice-Designated Census Tracts (Regional)	Minimum Increase	0.01	0.02
		Average Increase	7.50	4.99
		Maximum Increase	122.71	72.13

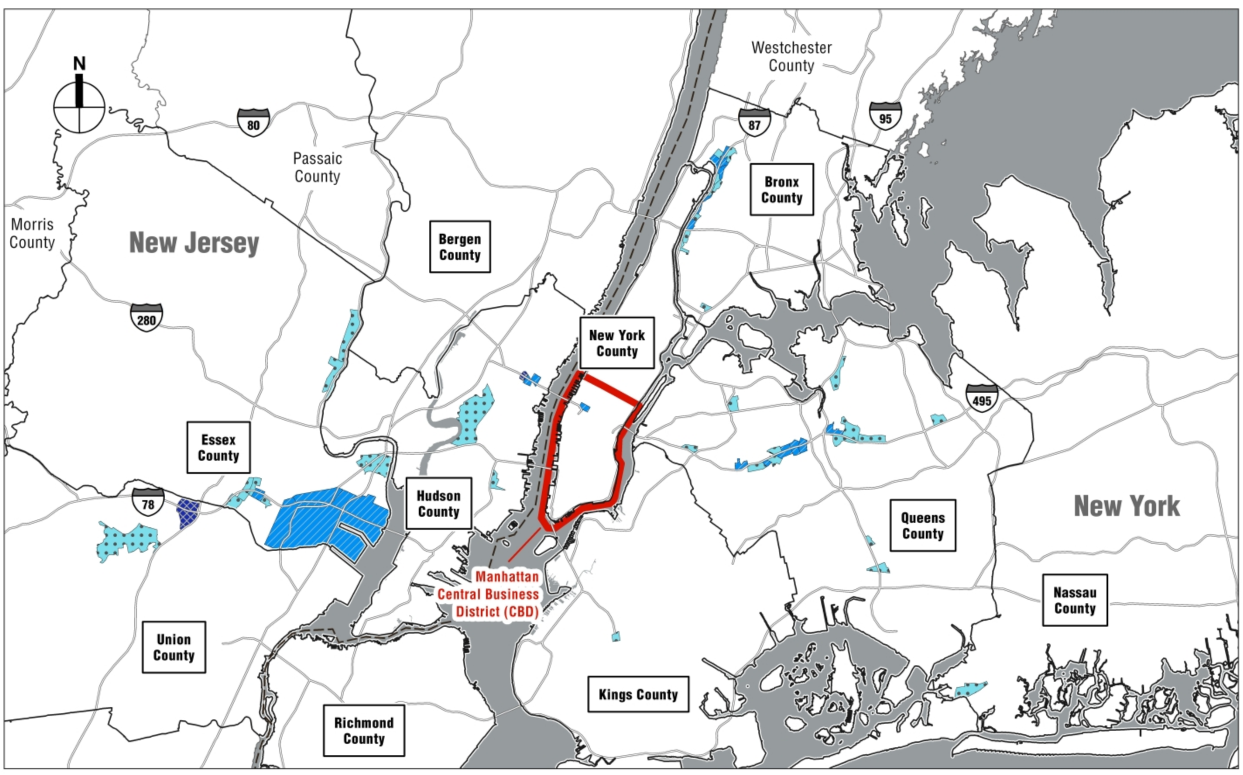
Source: U.S. Census Bureau, ACS 2015-2019 5-Year Estimates; USEPA NATA 2017 and Agency Air Quality System 2018 via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

Figure 17.1. Environmental Justice Census Tracts with Either Pre-Existing Pollutant Indicators or Pre-Existing Chronic-Disease Indicators At or Above the 90th Percentile That Could Experience Truck Traffic Decreases

Tolling Scenario E



Adopted Toll Structure



Truck Traffic Proximity Change (Equivalent at 300 m, Approx. 1,000 ft Away)

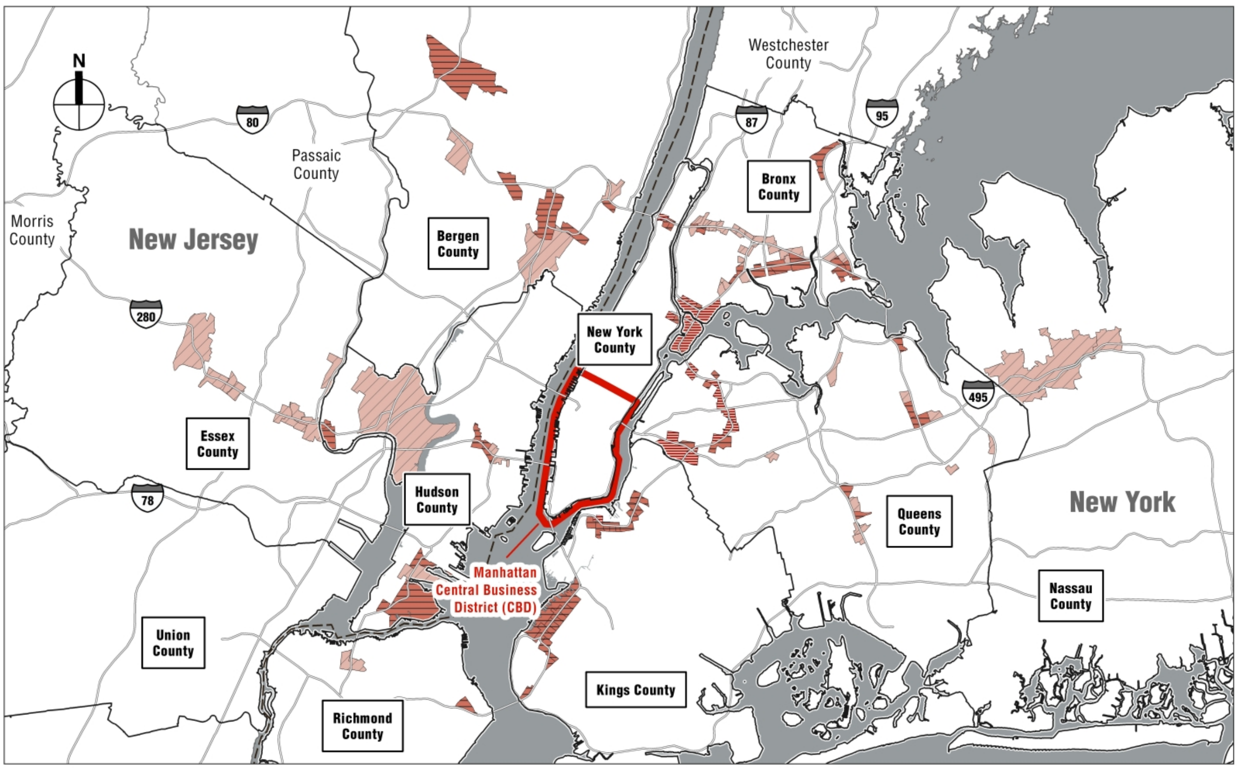
Decrease

- 1 - 700 trucks
- 701 - 4,200
- 4,201+

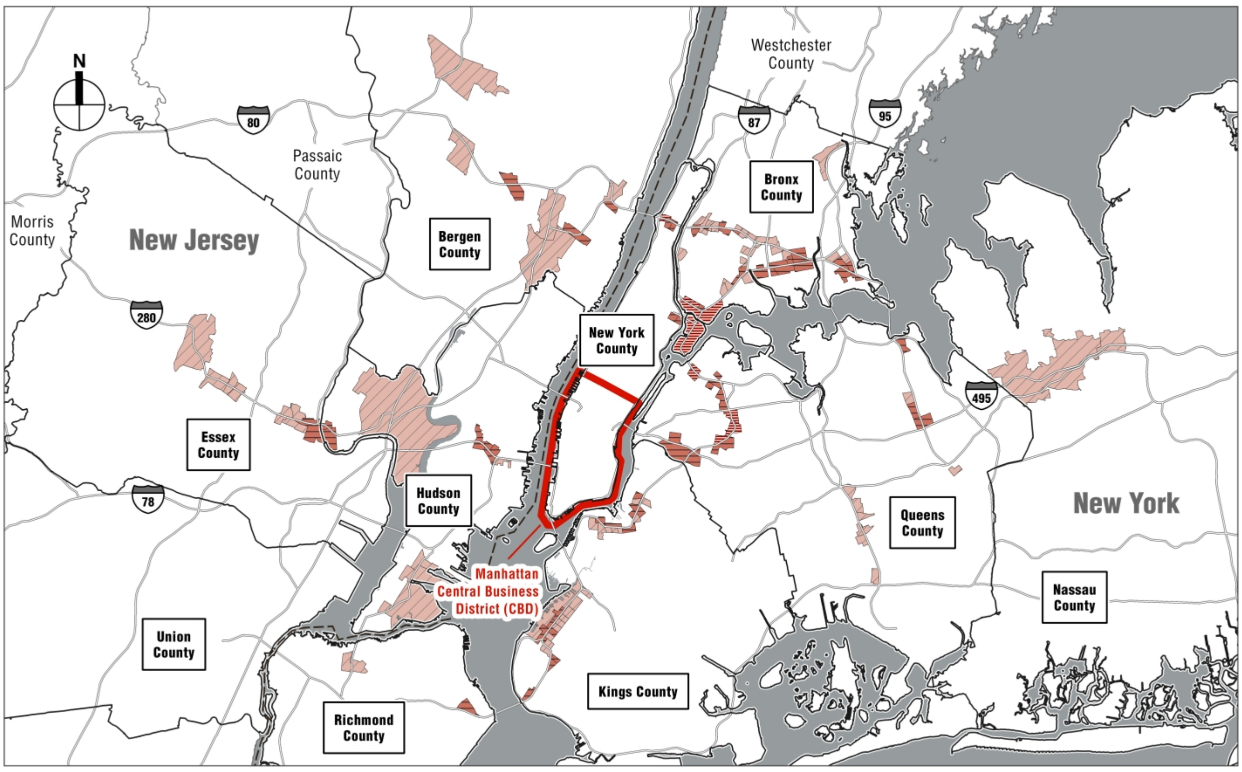
Source: USEPA NATA and Agency Air Quality System via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

Figure 17.2. Environmental Justice Census Tracts with Either Pre-Existing Pollutant Indicators or Pre-Existing Chronic-Disease Indicators At or Above the 90th Percentile That Could Experience Truck Traffic Increases

Tolling Scenario E



Adopted Toll Structure



Truck Traffic Proximity Change (Equivalent at 300 m, Approx. 1,000 ft Away)
Increase
1 - 700 trucks
701 - 4,200
4,201 +

Source: Source: USEPA NATA and Agency Air Quality System via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

- **Location of Tracts and Communities with Potential Truck Traffic Effects**: The adopted toll structure would have small differences in the tracts and communities where potential truck diversion effects would occur from those described in the Final EA, as summarized in **Table 17.6**.
  - Three new "90 or 90" tracts with potential truck traffic proximity decreases in communities already identified with potential truck traffic proximity decreases (included in **Table 17.5**).
  - Three new "90 or 90" communities identified with potential truck traffic proximity decreases (Bayside—Little Neck and Long Island City—Astoria, Queens County; Belleville, Essex County; see **Table 17.5**, which is a modification of Final EA Table 17D-14 with the adopted toll structure added), and one community identified for potential truck traffic proximity decreases under Scenario E but not under the adopted toll structure (Downtown—Heights—Slope/Park Slope, Kings County; removed from Table 17D-14 in **Table 17.5**).
  - Three new tracts in "90 or 90" communities with potential truck traffic proximity increases (as highlighted in **Table 17.7** and identified in **Figure 17.3**). In these tracts, modeling indicates potential truck traffic proximity increases ranging from 0.69 to 1.05 daily trucks per meter distance. These values are well below the average increase of 4.99 daily trucks per meter distance under the adopted toll structure among "90 or 90" tracts with potential increases. These values are also well below the average 7.50 increase among "90 or 90" tracts under Final EA Scenario E. These three tracts would benefit from the regional mitigation measures of expanding the NYC Clean Trucks and NYCDOT Off-Hours Delivery Programs. Note that these three new "90 or 90" tracts include the new "90 and 90" tract in High Bridge–Morrisania.
  - One less "90 or 90" community identified for regional mitigation (Ridgewood–Forest Hills, Queens County, identified in **Figure 17.3**). **Table 17.8,** below, is a modified version of Final EA Table 17D-15 that describes the communities identified for regional mitigation with the adopted toll structure added.
  - One new "90 and 90" tract within the already identified High Bridge–Morrisania, Bronx County community identified for place-based mitigation (highlighted in **Table 17.7**, and included in **Table 17.9** as well as in **Figure 17.4,** which is an updated version of Final EA Figure 17D-18 reflecting the adopted toll structure).
  - No new "90 and 90" communities identified for place-based mitigation (as illustrated in **Table 17.9** with the adopted toll structure added, below).
  - In the Final EA, Tables 17D-14, 17D-15, and 17D-17 depicted the baseline numbers of trucks traveling through or adjacent to these communities by including estimates of pre-existing truck average annual daily traffic volumes (AADT) on some highways, as examples, under the No Action Alternative. The tables also described the potential change in truck volumes under Tolling Scenario E, and the percentage change of the AADT. The versions of those tables below (**Table 17.5**,

Table 17.8, and **Table 17.9**, with the adopted toll structure added) present these truck-volume data as well.[14]

[14] As noted in the Final EA, Appendix 17D, Section 17D-6.1.4., in some cases, nearby roadways will show decreases in truck AADT when truck traffic proximity increases, and vice versa. This occurs because of the distance weighting that is part of calculating changes in truck traffic proximity. A nearby roadway may show a net increase in truck traffic AADT, but the center of a census tract's population may be closer to a portion of the roadway with estimated decreases in truck volumes, meaning that exposure to emissions and truck traffic proximity decreases (footnote 102, p. 17D-50).

Table 17.5 - Modified Final EA Table 17D-14. Environmental Justice Tracts and Communities That Could Experience Truck Traffic Proximity Decreases (Tolling Scenario E), With the Adopted Toll Structure ("90 or 90" Tracts and Communities)

COUNTY	COMMUNITY	NUMBER OF TRACTS BY NUMBER OF POLLUTANT OR CHRONIC DISEASE BURDENS (90TH PERCENTILE)		HIGHWAY	DAILY TRUCK VOLUME					
					FINAL EA SCENARIO E			ADOPTED TOLL STRUCTURE		
		FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE		NO ACTION (AADT)*	CHANGE (AADT)	CHANGE (%)	NO ACTION (AADT)*	CHANGE (AADT)	CHANGE (%)
Bronx, NY	Crotona–Tremont	5	5	Major Deegan Expwy	15,042	-643	-4%	15,042	-372	-2%
	Fordham–Bronx Park	1	1	Major Deegan Expwy	15,024	-686	-5%	15,024	-414	-3%
	High Bridge–Morrisania	3	2	Major Deegan Expwy	11,872	-165	-1%	11,803	-195	-2%
	Hunts Point–Mott Haven**	1	1	Bruckner Expwy	5,624	277	5%	5,624	263	5%
	Kingsbridge–Riverdale	7	7	Major Deegan Expwy	14,679	-595	-4%	14,679	-331	-2%
Kings, NY	Borough Park***	1	1	Ocean Pkwy	5,689	-11	-0.2%	5,689	64	1%
New York, NY	Chelsea–Clinton	1	1	Lincoln Tunnel	2,069	-155	-7%	2,069	-273	-13%
Queens, NY	Bayside–Little Neck		1	Long Island Expwy	Community does not have tracts with potential truck-traffic decreases adjacent to Long Island Expwy			18,049	-2	-0.01%
	Flushing–Clearview†	2	3	Long Island Expwy	11,340	-290	-3%	11,340	-371	-3%
				Whitestone Expwy	Community does not have tracts with potential truck-traffic decreases adjacent to Whitestone Expwy			7,929	174	2%
	Fresh Meadows	2	2	Long Island Expwy	11,542	-283	-2%	11,542	-357	-3%
	Jamaica	2	2	Van Wyck Expwy	7,487	-104	-1%	7,487	-60	-1%
	Long Island City–Astoria		1	Brooklyn Queens Expwy	Community does not have tracts with potential truck-traffic decreases adjacent to Brooklyn Queens Expwy			9,634	1,293	13%

Draft, Privileged and Confidential – for discussion purposes only; data still being assessed.

COUNTY	COMMUNITY	NUMBER OF TRACTS BY NUMBER OF POLLUTANT OR CHRONIC DISEASE BURDENS (90TH PERCENTILE)		HIGHWAY	DAILY TRUCK VOLUME					
					FINAL EA SCENARIO E			ADOPTED TOLL STRUCTURE		
		FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE		NO ACTION (AADT)*	CHANGE (AADT)	CHANGE (%)	NO ACTION (AADT)*	CHANGE (AADT)	CHANGE (%)
				Long Island Expwy	Community does not have tracts with potential truck-traffic decreases adjacent to Long Island Expwy			3,115	-157	-5%
	Ridgewood–Forest Hills	5	6	Long Island Expwy	12,250	-153	-1%	12,250	-339	-3%
	Southwest Queens	2	1	Van Wyck Expwy	5,039	-102	-2%	7,049	-132	-2%
	West Queens	6	6	Brooklyn Queens Expwy East	2,303	-64	-3%	2,303	-28	-1%
				Long Island Expwy	12,443	-170	-1%	12,443	-338	-3%
Essex, NJ	Belleville		1	McCarter Hwy (NJ Rt 21)	Community does not have tracts with potential truck-traffic decreases adjacent to McCarter Hwy			5,499	-4	-0.1%
	Newark	9	10	I-78	13,535	-547	-4%	13,535	-425	-3%
				I-95	12,573	-124	-1%	12,573	-25	-0.2%
				McCarter Hwy	5,154	-23	-0.4%	5,168	-16	-0.3%
				US 1-9	7,274	-30	-0.4%	7,274	-74	-1%
				US 22	5,018	-24	-0.5%	5,018	-31	-1%
Hudson, NJ	Jersey City	2	2	I-78	1,538	-580	-38%	1,538	-361	-23%
				Pulaski Skwy	4,622	-142	-3%	4,622	-5	-0.1%
	Union City	3	3	NJ 495	7,813	-703	-9%	7,813	-863	-11%
Union, NJ	Union	2	2	I-78	8,569	-310	-4%	8,569	-239	-3%
				US 22	4,289	-1	-0.03%	4,289	-3	-0.1%
Nassau, NY	Hempstead	1	1	Nassau Expwy	1,708	-2	-0.1%	1,708	-1	-0.1%

Source: U.S. Census Bureau, ACS 2015-2019 5-Year Estimates; USEPA NATA 2017 and Agency Air Quality System 2018 via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

Notes:

Results are not shown for Downtown–Heights–Slope (Park Slope) because no tracts with potential truck-traffic proximity decreases appeared in this community under the adopted toll structure.

* In some cases, specific tracts with potential traffic increases along a certain highway and within a community and differ between Scenario E, Scenario G, and the adopted toll structure. In these cases, the "No Action" AADT will differ because the section of the highway analyzed differs.

** Under Tolling Scenario E (as noted in Final EA Table 17D-14) as well as the adopted toll structure, truck traffic proximity is predicted to decrease in Census Tract 27.02, Bronx County, even though AADT on this highway shows a net increase. The center of the tract's population is near a portion of the highway where modeling indicates that truck traffic could decrease.

*** Under the adopted toll structure, Truck traffic proximity decreases in Census Tract 494, Kings County, even though AADT on this highway shows a net increase. Though the highway adjacent to the tract is predicted to see increases in truck traffic, the center of the tract's population is near a portion of the highway where modeling indicates that truck traffic could decrease.

† Under the adopted toll structure, Truck traffic proximity decreases in Census Tract 889.01, Queens County, even though AADT on the Whitestone Expwy shows a net increase. The center of the tract's population is near a portion of the highway where modeling indicates that truck traffic could decrease.

Table 17.6 - Summary of Environmental Justice Tracts and Communities That May Need Mitigation (Tolling Scenario E), with the Adopted Toll Structure

TOPIC	LOCATION	DATA SHOWN IN TABLE	FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE
Increases in truck traffic, as a result of traffic diversions, in communities already overburdened by preexisting air pollution and chronic diseases	**90 AND 90 (Place-Based)**	**Total Communities**	**13***	**13***
		Total Tracts (Black indicates new tracts in already-identified communities, grey in parentheses are tracts that were removed compared to the Final EA)	**55**	**56** 1 additional tract in High Bridge-Morrisania, Bronx, NY
		Communities Added (Relative to Final EA Tolling Scenario E)	--	none
		Communities Removed (Relative to Final EA Tolling Scenario E)	--	none
Increases in truck traffic, as a result of traffic diversions, in communities already overburdened by preexisting air pollution and chronic diseases	**90 OR 90 (Regional)**	**Total Communities**	**38**	**37**
		Total Tracts (Black indicates new tracts in already-identified communities, grey in parentheses are tracts that were removed compared to the Final EA)	**154**	**151** 1 additional tract in High Bridge-Morrisania, Bronx, NY (same as "90 AND 90" tract above) 1 additional tract in Downtown Brooklyn-Fort Greene / Downtown–Heights–Slope, Kings, NY 1 additional tract in Southwest Queens, Queens, NY (1 less tract in Bayside-Little Neck, Queens, NY) (1 less tract in Flushing-Clearview, Queens, NY) (1 less tract in Long Island City-Astoria, Queens, NY) (1 less tract in Ridgewood-Forest Hills, Queens) (1 less tract in Southeast Queens, Queens, NY) (1 less tract in Newark, Essex, NJ)
		Communities Added (Relative to Final EA Tolling Scenario E)	--	none
		Communities Removed (Relative to Final EA Tolling Scenario E)	--	1 (Ridgewood-Forest Hills, Queens, NY is removed)

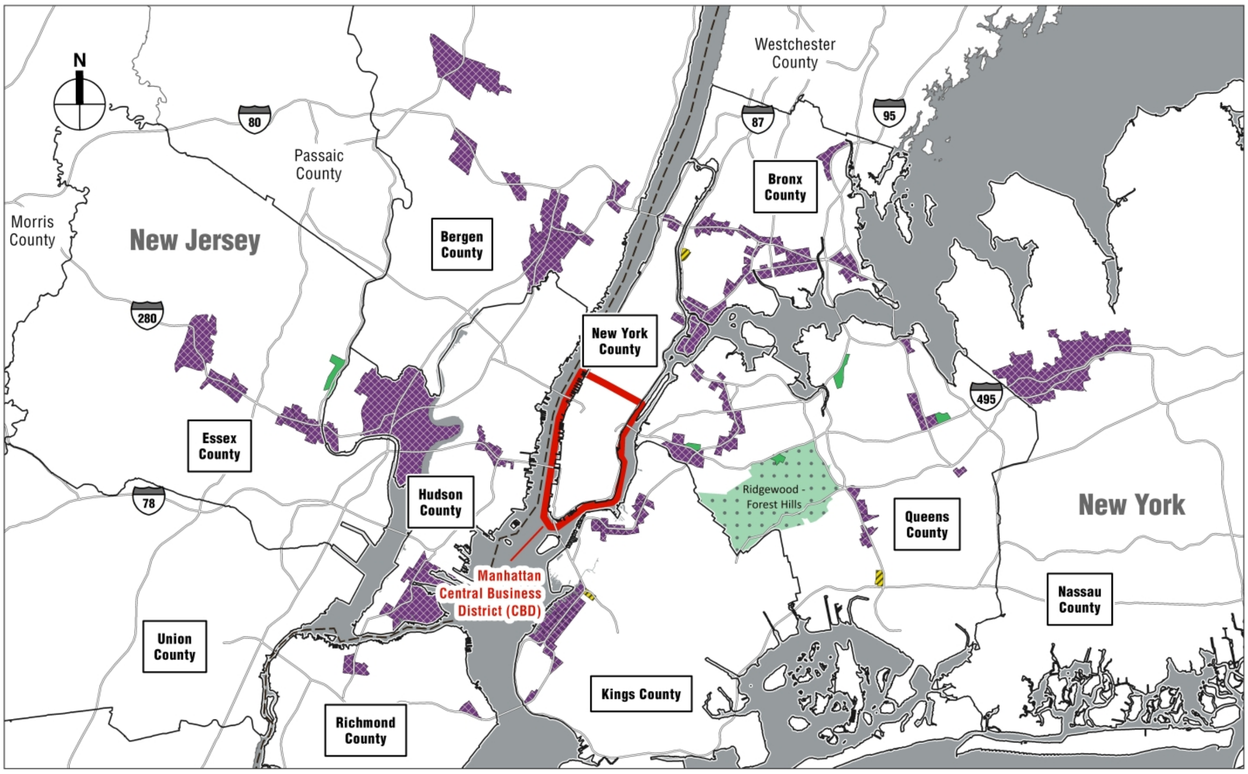
Source: U.S. Census Bureau, ACS 2015-2019 5-Year Estimates; USEPA NATA 2017 and Agency Air Quality System 2018 via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

Notes:

This table summarizes results analogous to those found in Final EA Tables 17D-15 and 17D-17 in Appendix 17D. Detailed versions of those tables with the adopted toll structure added are provided later in this section of the reevaluation.

* Final EA Table 17D-17 for Tolling Scenario E grouped the 13 identified communities into 11 table rows: High Bridge – Morrisania was grouped with "Crotona–Tremont" in one line because tracts in both communities would have potential effects from truck traffic on the Cross Bronx Expressway. Hunts Point–Mott Haven and Pelham–Throgs Neck were also grouped in one line because tracts in both communities would have potential effects from truck traffic on the Bruckner Expressway. City of Orange, East Orange, and Newark were also grouped in one line because tracts in these three communities would have potential effects from truck traffic on I-280. Finally, Table 17D-17 did not show Tract 3009 in North Hempstead, Nassau County. As noted, "[p]otential truck volume increases and decreases on roadways within the tract would ultimately cancel each other out and result in no change of truck traffic proximity for the residential populations within the tract."

Figure 17.3. "90 or 90" Environmental Justice Census Tracts and Communities That Could Experience Truck Traffic Increases, Tolling Scenario E Compared with the Adopted Toll Structure



Overburdened Tracts with Truck Traffic Proximity Increases
Scenario E Compared with Adopted Toll Structure
Proximity Increase in Both Scenario E and in Adopted Toll Structure
Proximity Increase in Adopted Toll Structure, No Increase in Scenario E
Proximity Increase in Scenario E, No Increase in Adopted Toll Structure
Community with Proximity Increase Tract in Scenario E, No Proximity Increase Tract in Adopted Toll Structure

Source: USEPA NATA and Agency Air Quality System via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

Table 17.7 - Modified Final EA Table 17D-15. Environmental Justice Tracts and Communities That May Need Mitigation (Tolling Scenario E), With the Adopted Toll Structure ("90 or 90" Tracts and Communities)

COUNTY	COMMUNITY	NO. OF TRACTS WITH AT LEAST ONE PRE-EXISTING POLLUTANT OR CHRONIC DISEASE BURDEN (90TH PERCENTILE)		HIGHWAY	DAILY TRUCK VOLUME					
					FINAL EA SCENARIO E			ADOPTED TOLL STRUCTURE		
		FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE		NO ACTION (AADT)	CHANGE (AADT)	CHANGE (%)	NO ACTION (AADT)	CHANGE (AADT)	CHANGE (%)
Bronx, NY	Crotona–Tremont	16	16	Cross Bronx Expwy	21,819	168	1%	21,819	237	1%
	High Bridge–Morrisania	4	5	Cross Bronx Expwy	21,819	168	1%	21,819	237	1%
				Major Deegan Expwy	Community does not have tracts with potential truck-traffic increases adjacent to Major Deegan Expwy			14,106	240	2%
	Hunts Point–Mott Haven	11	11	Major Deegan & Bruckner Expwys	7,618	874	11%	7,618	695	9%
				Approach to RFK Bridge	9,868	1,339	14%	9,868	1,100	11%
	Northeast Bronx	1	1	New England Thruway	13,640	191	1%	13,640	106	1%
	Pelham–Throgs Neck	17	17	Cross Bronx Expwy Ext.	9,580	398	4%	9,580	388	4%
				Throgs Neck Expwy	4,194	50	1%	4,194	73	2%
				Bruckner Expwy	5,624	277	5%	5,624	263	5%
Kings, NY	Bensonhurst–Bay Ridge	2	2	Gowanus Expwy	8,328	495	6%	8,328	270	3%
	Downtown–Heights–Slope (Downtown Brooklyn–Fort Greene)*	8	9	Brooklyn Queens Expwy	14,107	891	6%	14,107	378	3%
				Prospect Expwy	Community does not have tracts with potential truck-traffic increases adjacent to Prospect Expwy			5,942	51	1%
	Greenpoint (South Williamsburg)**	7	7	Brooklyn Queens Expwy	15,762	878	6%	15,762	452	3%
	Sunset Park	15	15	Gowanus Expwy	10,015	632	6%	10,015	290	3%
New York, NY	East Harlem	2	2	Approach to RFK Bridge	1,513	1,556	103%	1,513	423	28%

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COUNTY	COMMUNITY	NO. OF TRACTS WITH AT LEAST ONE PRE-EXISTING POLLUTANT OR CHRONIC DISEASE BURDEN (90TH PERCENTILE)		HIGHWAY	DAILY TRUCK VOLUME					
					FINAL EA SCENARIO E			ADOPTED TOLL STRUCTURE		
		FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE		NO ACTION (AADT)	CHANGE (AADT)	CHANGE (%)	NO ACTION (AADT)	CHANGE (AADT)	CHANGE (%)
	Randall's Island***	1	1	RFK Bridge on Randall's Island	12,432	3,170	25%	12,432	1,913	15%
	Washington Heights–Inwood	3	3	Trans-Manhattan Expwy	17,370	385	2%	17,370	338	2%
Queens, NY	Bayside–Little Neck	5	4	Clearview Expwy	12,029	485	4%	12,029	480	4%
	Flushing–Clearview	2	1	Clearview Expwy	14,332	631	4%	14,332	602	4%
				Whitestone Expwy	7,929	455	6%	Community does not have tracts with potential truck-traffic increases adjacent to Whitestone Expwy		
	Jamaica	4	4	Van Wyck Expwy	8,876	303	3%	8,876	50	1%
	Long Island City–Astoria	7	6	Grand Central Pkwy	9,935	2,522	25%	9,935	1,447	15%
				Brooklyn Queens Expwy	12,572	1,982	16%	12,572	1,308	10%
				Long Island Expwy	5,247	260	5%	5,247	-96	-2%
	Southeast Queens†	2	1	Clearview Expwy	7,649	59	1%	7,649	67	1%
	Southwest Queens††	2	3	Van Wyck Expwy	7,264	12	0.2%	5,999	66	1%
	West Queens	9	9	Long Island Expwy	5,247	260	5%	5,247	-96	-2%
				Brooklyn Queens Expwy	8,657	1,696	20%	8,657	1,024	12%
Richmond, NY	Port Richmond	2	2	MLK Expwy	3,023	339	11%	3,023	84	3%
	Stapleton–St. George	1	1	Staten Island Expwy	8,625	763	9%	8,625	363	4%
Bergen, NJ	Fort Lee	2	2	I-95	21,427	368	2%	21,427	438	2%
				N Bergen Blvd (US-46)	6,499	312	5%	6,499	162	2%
				NJ Rt 4	12,413	35	0.3%	12,413	105	1%
	Hackensack	1	1	I-80	15,034	208	1%	15,034	68	0.5%

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COUNTY	COMMUNITY	NO. OF TRACTS WITH AT LEAST ONE PRE-EXISTING POLLUTANT OR CHRONIC DISEASE BURDEN (90TH PERCENTILE)		HIGHWAY	DAILY TRUCK VOLUME					
					FINAL EA SCENARIO E			ADOPTED TOLL STRUCTURE		
		FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE		NO ACTION (AADT)	CHANGE (AADT)	CHANGE (%)	NO ACTION (AADT)	CHANGE (AADT)	CHANGE (%)
	Ridgefield Park Village	1	1	US-46	3,202	195	6%	3,202	44	1%
	Palisades Park	1	1	US-1-9-46	2,854	344	12%	2,854	70	2%
	Lodi	1	1	I-80	9,976	164	2%	9,976	211	2%
				NJ Rt 17	9,387	345	4%	9,387	258	3%
				US-46	4,420	13	0.3%	4,420	8	0.2%
	Paramus	1	1	NJ Rt 17	8,890	335	4%	8,890	201	2%
				NJ Rt 4	7,300	3	0.04%	7,300	-42	-1%
	Ridgefield	1	1	I-95	10,644	266	2%	10,644	66	1%
				US-9	2,905	48	2%	2,905	29	1%
Essex, NJ	East Orange	1	1	I-280	5,688	115	2%	5,688	137	2%
	Newark	6	5	McCarter Hwy (NJ Rt 21)	6,381	17	0.3%	Community does not have tracts with potential truck-traffic increases adjacent to McCarter Hwy (NJ Rt 21)		
				I-280	6,425	117	2%	6,425	138	2%
	West Orange	1	1	I-280	5,618	116	2%	5,618	136	2%
	City of Orange	2	2	I-280	5,722	115	2%	5,722	135	2%
Hudson, NJ	Bayonne	4	4	NJ Rt 440	7,432	443	6%	7,432	238	3%
	Harrison	2	2	I-280	6,951	118	2%	6,951	155	2%
	Jersey City	5	5	Tonnelle Ave	4,461	540	12%	4,461	479	11%
				NJ Rt 139	3,571	207	6%	3,571	341	10%
	Kearny	1	1	I-280	6,954	107	2%	6,954	154	2%
				NJ Rt 9	11,481	359	3%	11,481	260	2%
Nassau, NY	North Hempstead	2	2	Long Island Expwy	7,744	3	0.04%	7,744	3	0.04%

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Source: U.S. Census Bureau, ACS 2015-2019 5-Year Estimates; USEPA NATA 2017 and Agency Air Quality System 2018 via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

Notes:

Results are not shown for Ridgewood–Forest Hills because no tracts with potential truck-traffic proximity increases appeared in this community under the adopted toll structure.

In the Final EA, No Build truck AADT and Scenario E truck AADT change were miscalculated for a few portions of highways described in Tables 17D-15. This table includes corrected values. These corrections do not change the conclusions of the Final EA, as potential truck-traffic proximity increases of any magnitude were used to identify tracts and communities for potential effects and mitigation.

* As noted in Final EA, Appendix D to Appendix 17D, Part of the Downtown–Heights–Slope UHF neighborhood but labelled “Downtown Brooklyn-Fort Greene” to further specify location.

** As noted in Final EA, Appendix D to Appendix 17D, Part of the Greenpoint UHF neighborhood, but labeled as “South Williamsburg” to further specify location.

*** As noted in Final EA, Appendix D to Appendix 17D, part of the East Harlem UHF neighborhood, but labeled as “Randall’s Island” to further specify location.

† Under Tolling Scenario E (as noted in Final EA Tables 17D-10 and 17D-15), Census Tract 1571.02, Queens County, a truck traffic proximity increase is predicted due to an increase of less than 1 truck per day on a Cross Island Parkway service road under Tolling Scenario E; the tract does not have potential truck-traffic proximity increases under the adopted toll structure.

†† No Action AADT differs between Tolling Scenario E and adopted toll structure on the Van Wyck Expwy because an additional tract with potential truck-traffic proximity increases under adopted toll structure extends the length of the highway along which the No Action AADT was measured

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Table 17.8 - Modified Final EA Table 17D-17. Environmental Justice Tracts and Communities That Would Merit Place-Based Mitigation (Scenario E), With the Adopted Toll Structure ("90 and 90" Tracts and Communities)

COUNTY	MAP MARKER	COMMUNITY	NO. OF TRACTS WITH AT LEAST ONE PRE-EXISTING POLLUTANT AND CHRONIC DISEASE BURDEN		HIGHWAYS	DAILY TRUCK VOLUME					
			FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE		FINAL EA SCENARIO E			ADOPTED TOLL STRUCTURE		
						No Action (AADT)	Change (AADT)	Change (%)	No Action (AADT)	Change (AADT)	Change (%)
Bronx, NY	1	High Bridge–Morrisania and Crotona–Tremont	18	18	Cross Bronx Expwy	21,819	168	0.8%	21,819	237	1.1%
			0	1	Major Deegan Expwy	Community does not have tracts with potential truck traffic increases adjacent to Major Deegan Expwy			14,106	240	1.7%
	2	Hunts Point–Mott Haven/Pelham–Throgs Neck	14	14	Bruckner Expwy	5,624	277	4.9%	5,624	263	4.7%
	3	Hunts Point–Mott Haven	3	3	Major Deegan & Bruckner Expwys	7,618	874	11.5%	7,618	695	9.1%
			1*	1*	Approach to RFK Bridge	9,868	1,339	13.6%	9,868	1,100	11.1%
	4	Pelham–Throgs Neck	1	1	Throgs Neck Expwy	4,194	50	1.2%	4,194	73	1.7%
			1	1	Cross Bronx Expwy Ext.	9,580	398	4.2%	9,580	388	4.1%
	5	Northeast Bronx	1	1	New England Thruway	13,640	191	1.4%	13,640	106	0.8%
New York,	6	East Harlem	2	2	RFK Bridge Approach at E 125th St	1,702	1,924	113.0%	1,702	672	39.5%
	7	Randall's Island**	1	1	RFK Bridge on Randall's Island	12,432	3,170	25.5%	12,432	1,913	15.4%
Kings, NY	8	Downtown–Heights–Slope (Downtown Brooklyn–Fort Greene)***	3	3	Brooklyn Queens Expwy	14,107	891	6.3%	14,107	378	2.7%
	9	Greenpoint (South Williamsburg)†	4	4	Brooklyn Queens Expwy	15,870	853	5.4%	15,870	428	2.7%
Essex, NJ	10	Orange–East Orange–Newark	6	6	I-280	6,106	116	1.9%	6,106	137	2.2%

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COUNTY	MAP MARKER	COMMUNITY	NO. OF TRACTS WITH AT LEAST ONE PRE-EXISTING POLLUTANT AND CHRONIC DISEASE BURDEN		HIGHWAYS	DAILY TRUCK VOLUME					
						FINAL EA SCENARIO E			ADOPTED TOLL STRUCTURE		
			FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE		No Action (AADT)	Change (AADT)	Change (%)	No Action (AADT)	Change (AADT)	Change (%)
Bergen, NJ	11	Fort Lee	1	1	I-95/George Washington Bridge	14,768	195	1.3%	14,768	231	1.6%

Source: U.S. Census Bureau, ACS 2015-2019 5-Year Estimates; USEPA NATA 2017 and Agency Air Quality System 2018 via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

Notes:

As in Final EA Table 17D-17, this table lists the 13 identified communities under both Tolling Scenario E and the adopted toll structure into 11 rows. Census Tract 3009, Nassau County, not shown. As noted in Final EA, Table 17D-17, "closer examination indicates that this tract is shown with a potential increase in truck traffic proximity under Tolling Scenario E; though roadways passing through the tract have the potential to see decreases in truck traffic, the center of its population is near [a portion of] a roadway where modeling indicates that truck traffic could increase."

In the Final EA, No Build truck AADT and Scenario E truck AADT change were miscalculated for a portion of a highway described in Table 17D-17. This table includes corrected values. These corrections do not change the conclusions of the Final EA, as potential truck-traffic proximity increases of any magnitude were used to identify tracts and communities for potential effects and mitigation.

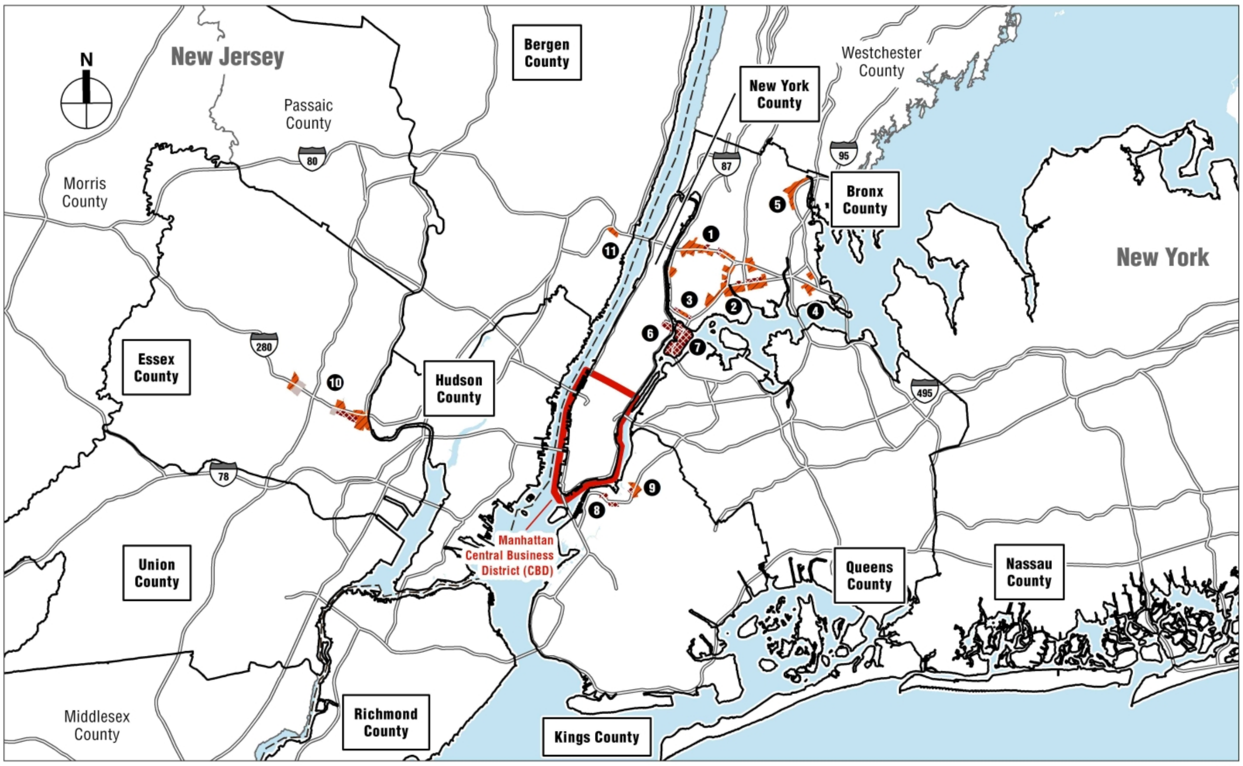
* Census Tract 27.01, Bronx County, immediately north of junction between RFK Bridge approach and Bruckner Expwy; tract also included in row for Major Deegan & Bruckner Expwys above.

** As noted in Final EA, Appendix D to Appendix 17D, part of the East Harlem UHF neighborhood, but labeled as "Randall's Island" to further specify location.

*** As noted in Final EA, Appendix D to Appendix 17D, Part of the Downtown–Heights–Slope UHF neighborhood but labelled "Downtown Brooklyn-Fort Greene" to further specify location.

† As noted in Final EA, Appendix D to Appendix 17D, Part of the Greenpoint UHF neighborhood, but labeled as "South Williamsburg" to further specify location.

Figure 17.4. Modified Final EA Figure 17D-18. Environmental Justice Census Tracts with High Pre-Existing Pollutant and Chronic Disease Burdens Where Truck Traffic Proximity Could Potentially Increase (Adopted Toll Structure)



Combined Number of Pre-Existing Pollutant and Chronic Disease Burdens At or Above the 90th Percentile
- 2 - 3
- 4 - 5
- 6 - 7

1. High Bridge-Morrissania and Crotona-Tremont
2. Hunts Point-Mott Haven and Pelham-Throgs Neck
3. Hunts Point-Mott Haven
4. Pelham-Throgs Neck
5. Northeast Bronx
6. East Harlem
7. Randall's Island
8. Downtown Brooklyn-Fort Greene
9. South Williamsburg
10. Orange-East Orange-Newark
11. Fort Lee

0 5 MILES

Source: USEPA NATA and Agency Air Quality System via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

Note: Percentiles are national. Census Tract 3009, Nassau County not shown. Potential truck volume increases and decreases on roadways within the tract would ultimately cancel each other out and result in no change of truck traffic proximity for the residential populations within the tract.

Non-Truck Traffic

- **Intensity of Potential Non-Truck-Traffic Increases:** Under the adopted toll structure, non-truck traffic increases would be of a lower intensity, as illustrated in **Table 17.11**, which provides the minimum, average, and maximum increase in truck-traffic proximity for environmental justice-designated census tracts for Final EA Tolling Scenarios E and G, as well as the adopted toll structure. As described in Final EA Appendix 17D, non-truck traffic proximity uses the same calculation method used for truck-traffic proximity.[15] The average and maximum non-truck-traffic proximity increases that would occur with the adopted toll structure are all smaller than with the Final EA Tolling Scenario E or G.
- **Location of Tracts and Communities with Potential Non-Truck Traffic Effects:** Under the adopted toll structure, small differences in the tracts and communities where potential non-truck diversion effects would occur, without potential truck effects, from those described in the Final EA, as illustrated in **Table 17.12**, which is Final EA Tables 17D-12 and 17D-13 with the adopted toll structure added. No new communities with potential non-truck traffic increases but without truck-traffic increases.
  - Four new tracts in overburdened communities with potential non-truck traffic increases, without truck-traffic proximity increases that did not appear under Tolling Scenarios E or G as illustrated in **Table 17.11**. Two of these four tracts had potential increases in non-truck traffic under Tolling Scenarios E and G but also had increase in truck-traffic proximity. Under the adopted toll structure, these tracts do not have potential truck-traffic proximity increases, and so appear as having potential non-truck effects.
  - In the Final EA, Tables 17D-12 and 17D-13 provide data about some of the adjacent roadways where non-truck volume decreases could occur, including estimates of average annual daily non-truck AADT on highways under the No Action Alternative, modeled changes in non-truck AADT with CBDTP, and the percentage that this change would represent from the No Action Alternative. **Table 17.12** presents these AADT data as well.[16]

15 Final EA Appendix 17D, Section 17D-6.1.5, p. 17D-56.

16 As noted in the Final EA, Appendix 17D, Tables 17D-12 and 17D-13, and similar to tables describing truck traffic proximity increases, in some cases, nearby roadways will show decreases in non-truck AADT when truck traffic proximity increases, and vice versa. This occurs because of the distance weighting that is part of calculating changes in truck traffic proximity. A nearby roadway may show a net increase in truck traffic AADT, but the center of a census tract's population may be closer to a portion of the roadway with estimated decreases in truck volumes, meaning that exposure to emissions and truck traffic proximity decreases.

Table 17.9 - Range of Non-Truck-Traffic Proximity Increases for Environmental Justice-Designated Overburdened Tracts Where Truck Traffic Proximity Would Not Also Increase

TOPIC	LOCATION	DATA SHOWN IN TABLE	NON-TRUCK TRAFFIC PROXIMITY CHANGE (DAILY NON-TRUCKS PER METER DISTANCE)		
			FINAL EA SCENARIO E	FINAL EA SCENARIO G	ADOPTED TOLL STRUCTURE
Increases in non-truck traffic proximity , as a result of traffic diversions, in communities already overburdened by preexisting air pollution and chronic diseases, but where truck traffic would not also increase	80 OR 66.66 Environmental Justice Designated Census Tracts	Minimum	0.31	0.03	0.08
		Average	22.69	26.37	12.69
		Maximum	216.02	316.77	159.61

Source: U.S. Census Bureau, ACS 2015-2019 5-Year Estimates; USEPA NATA 2017 and Agency Air Quality System 2018 via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

Table 10. Table 17.11 - Change in Non-Truck Traffic Proximity for Overburdened Environmental Justice-Designated Tracts Without Truck-Traffic Proximity Increases Under the Adopted Toll Structure, and which Did Not Appear Under Tolling Scenarios E and G

LOCATION	NON-TRUCK TRAFFIC PROXIMITY CHANGE (DAILY NON-TRUCKS PER METER DISTANCE)			HIGHWAY	NON-TRUCK TRAFFIC					
					SCENARIO E		SCENARIO G		ADOPTED TOLL STRUCTURE	
	SCENARIO E	SCENARIO G	ADOPTED TOLL STRUCTURE		CHANGE (AADT)	CHANGE (%)	CHANGE (AADT)	CHANGE (%)	CHANGE (AADT)	CHANGE (%)
Tract 334, Bronx County, NY (Fordham–Bronx Park)*	-6.75	-4.57	0.34	Bronx River Pkwy	-334	-0.3%	-102	-0.1%	-19	-0.02%
Tract 68, Bronx County, NY (Pelham–Throgs Neck)	-1.43	-0.02	0.08	Bronx River Pkwy	-168	-0.3%	-8	0.0%	12	0.02%
Tract 1571.02, Queens County, NY (Southeast Queens)**	9.43	12.32	11.28	Cross Island Pkwy	463	0.4%	714	0.6%	802	0.7%
Tract 96, Essex County, NJ (Newark)***	2.08	1.80	3.30	McCarter Hwy (NJ Rt 21)	470	1%	404	1%	779	2%

Source: U.S. Census Bureau, ACS 2015-2019 5-Year Estimates; USEPA NATA 2017 and Agency Air Quality System 2018 via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

Notes:

* Closer examination indicates that this tract is predicted to have an increase in non-truck traffic proximity under Scenario E and the adopted toll structure; though the portion of the Bronx River Pkwy passing through the tract is predicted to see a net decrease in non-truck traffic, the center of its population is near a portion of a highway where modeling indicates that non-truck traffic could increase

** Under Tolling Scenario E (as noted in Final EA Tables 17D-10 and 17D-15), as well as under Tolling Scenario G, Census Tract 1571.02, Queens County shows a potential non-truck traffic proximity increase, but it also shows a potential truck traffic proximity increase due to an increase of less than 1 truck per day on a Cross Island Parkway service road. Because of this small, potential truck traffic proximity increase, this tract was included in Table 17D-15 along with other tracts showing potential truck-traffic proximity increases under Tolling Scenario E. Under the adopted toll structure, the potential increase in truck traffic proximity is zero, which is why Census Tract 1571.02, Queens County appears in this table

*** Under Tolling Scenarios E and G, Census Tract 96, Essex County, has potential increases in both truck and non-truck traffic proximity. Thus, the tract did not appear in Final EA Tables 17D-12 and 17D-13. Under the adopted toll structure, the tract has potential truck-traffic proximity decreases, which is why it appears in this table

Table 17.11 - Modified Final EA Table 17D-12 and 17D-13. Environmental Justice Tracts and Communities That Could Experience Non-Truck Traffic Proximity Increases without Truck Traffic Proximity Increases under the Adopted Toll Structure with Scenarios E & G

This table shows the number of environmental justice-designated tracts in each community with at least one pre-existing pollutant (80th percentile) or chronic disease burden (66.66th percentile). Blue shading behind the numbers of tracts under Tolling Scenarios E and G indicates that the corresponding community is not identified in the table of communities having highly burdened environmental justice-designated tracts with potential truck-traffic proximity increases under Tolling Scenario E (Final EA Table 17D-10). For the adopted toll structure, blue shading also appears behind the number of tracts to indicate that the corresponding community is not identified in the table of communities having highly burdened environmental justice-designated tracts with potential truck-traffic proximity increases under the adopted toll structure.

COUNTY	COMMUNITY	NUMBER OF TRACTS BY NUMBER OF PRE- EXISTING POLLUTANT (80TH PERCENTILE) OR CHRONIC DISEASE BURDENS (66.66TH PERCENTILE)			HIGHWAY	FINAL EA SCENARIO E			FINAL EA SCENARIO G			ADOPTED TOLL STRUCTURE		
		FINAL EA SCENARIO E	FINAL EA SCENARIO G	ADOPTED TOLL STRUCTURE		DAILY NON-TRUCK NO ACTION (AADT)*	DAILY NON-TRUCK CHANGE (AADT)	DAILY NON-TRUCK CHANGE (%)	DAILY NON-TRUCK NO ACTION (AADT)	DAILY NON-TRUCK CHANGE (AADT)	DAILY NON-TRUCK CHANGE (%)	DAILY NON-TRUCK NO ACTION (AADT)	DAILY NON-TRUCK CHANGE (AADT)	DAILY NON-TRUCK CHANGE (%)
Bronx, NY	Fordham–Bronx Park	3	8	8	Bronx River Pkwy	95,415	-17	-0.02%	95,415*	301	0.3%	105,451*	10	0.01%
					Mosholu Pkwy	49,364	183	0.4%	49,364	291	1%	49,364	393	1%
	Kingsbridge–Riverdale**	1	2	1	Bronx River Pkwy	88,312	158	0.2%	88,312	502	1%	88,312	355	0.4%
					Henry Hudson Pkwy	52,188	-2,013	-4%	52,188	-1,338	-3%	52,188	-1,226	-2%
					Major Deegan Expwy	137,804	-2,620	-2%	137,804	-1,650	-1%	138,304	-2,256	-2%
					Mosholu Pkwy	70,125	-631	-1%	70,125	-125	-0.2%	70,125	-210	-0.3%
	Northeast Bronx***	5	4	5	Bronx River Pkwy	88,312	158	0.2%	88,312	502	1%	88,312	355	0.4%
					Hutchinson River Pkwy	139,000	-132	-0.1%	Community does not have tracts with potential traffic increases adjacent to Hutchinson River Pkwy			139,000	90	0.1%
					New England Thruway	114,329	-2,330	-2%	Community does not have tracts with potential traffic increases adjacent to New England Thruway			114,329	-1,963	-2%
	Pelham–Throgs Neck		5	1	Bronx River Pkwy	Community does not have tracts with potential traffic increases adjacent to Bronx River Pkwy			Community does not have tracts with potential traffic increases adjacent to Bronx River Pkwy			51,051	12	0.02%
					Cross Bronx Expwy Ext	All tracts with non-truck traffic increases adjacent to Cross Bronx Expwy Ext also have truck-traffic proximity increases and are included in Table 17D-15			67,348	2,945	4%	Tract with non-truck traffic increases adjacent to Cross Bronx Expwy Ext also has truck traffic increases, and is included in Table 17D-15		
Kings, NY	Bensonhurst–Bay Ridge		7	5	Belt Pkwy	All tracts with non-truck traffic increases also have truck-traffic proximity increases and are included in Table 17D-15			102,954*	215	0.2%	108,802*	1,155	1%
					Brooklyn Queens Expwy				53,564*	2,128	4%	41,286*	1,472	4%
	Canarsie–Flatlands		2	2	Belt Pkwy	Community does not have tracts with potential traffic increases adjacent to Belt Pkwy			126,307	432	0.3%	126,307	756	1%
	Coney Island–Sheepshead Bay		7	7	Belt Pkwy	Community does not have tracts with potential traffic increases adjacent to Belt Pkwy			118,945	930	1%	118,945	1,124	1%
	East New York	1	1	1	Jackie Robinson Pkwy	87,492	1,440	2%	87,492	538	1%	87,492	1,382	2%
New York, NY	Central Harlem–Morningside Heights†		3	1	Harlem River Dr	Community does not have tracts with potential traffic increases adjacent to Harlem River Dr			122,662	1,037	1%	120,876	-315	-0.3%
	Lower Manhattan	1	1	1	FDR Dr	44,052	5,755	13%	44,052	3,137	7%	44,052	1,364	3%
	Union Square–Lower East Side (Lower East Side)	4	4	4	FDR Dr	107,507	7,672	7%	107,507	8,150	8%	107,507	7,609	7%

COUNTY	COMMUNITY	NUMBER OF TRACTS BY NUMBER OF PRE- EXISTING POLLUTANT (80TH PERCENTILE) OR CHRONIC DISEASE BURDENS (66.66TH PERCENTILE)			HIGHWAY	FINAL EA SCENARIO E			FINAL EA SCENARIO G			ADOPTED TOLL STRUCTURE		
		FINAL EA SCENARIO E	FINAL EA SCENARIO G	ADOPTED TOLL STRUCTURE		DAILY NON-TRUCK NO ACTION (AADT)*	DAILY NON-TRUCK CHANGE (AADT)	DAILY NON-TRUCK CHANGE (%)	DAILY NON-TRUCK NO ACTION (AADT)	DAILY NON-TRUCK CHANGE (AADT)	DAILY NON-TRUCK CHANGE (%)	DAILY NON-TRUCK NO ACTION (AADT)	DAILY NON-TRUCK CHANGE (AADT)	DAILY NON-TRUCK CHANGE (%)
Queens, NY	Flushing–Clearview	1	2	2	Cross Island Pkwy	110,139	295	0.3%	110,139	282	0.3%	110,139	597	1%
					Whitestone Expwy	Tract with non-truck traffic increases adjacent to Whitestone Expwy also has truck-traffic increases and is included in Table 17D-15			163,532	1,054	1%	163,532	115	0.07%
	Jamaica††	1	2	1	Belt Pkwy	155,884	-617	-0.4%	155,884	-165	-0.1%	Community does not have tracts with potential traffic increases adjacent to Belt Pkwy		
					JFK Expwy	34,513	7	0.02%	34,513	-262	-1%	Community does not have tracts with potential traffic increases adjacent to JFK Expwy		
					Nassau Expwy	66,009	-1,023	-2%	66,009	-977	-1%	Community does not have tracts with potential traffic increases adjacent to Nassau Expwy		
					Van Wyck Expwy	159,528	-138	-0.09%	159,528	751	0.5%	159,528	122	0.08%
	Ridgewood–Forest Hills	2	2	2	Jackie Robinson Pkwy	117,227	553	0.5%	117,227	512	0.4%	117,227	651	1%
	Southeast Queens	2	3	4	Belt Pkwy	157,617	53	0.03%	157,617	583	0.4%	157,617	321	0.2%
					Cross Island Pkwy	136,974	-41	-0.03%	136,974	526	0.4%	125,701	544	0.4%
					Hook Creek Blvd	3,356	26	0.8%	3,356	-19	-1%	3,356	-73	-2%
	Southwest Queens	1	3	2	Belt Pkwy	167,960	-1,855	-1%	167,960	841	1%	167,960	952	1%
					Nassau Expwy	Community does not have tracts with potential traffic increases adjacent to Nassau Expwy			32,379	-910	-3%	32,379	-631	-2%
					Van Wyck Expwy	132,116	534	0.4%	132,116	-535	-0.4%	Tract with non-truck traffic increases adjacent to Van Wyck Expwy also has truck traffic increases, and is included in Table 17D-15		
	West Queens	1	3	3	Grand Central Pkwy	Community does not have tracts with potential traffic increases adjacent to Grand Central Pkwy			109,447	859	1%	109,447	280	0.3%
					Long Island Expwy	184,144	1,108	0.6%	Community does not have tracts with potential traffic increases adjacent to Long Island Expwy			Community does not have tracts with potential traffic increases adjacent to Long Island Expwy		
Bergen, NJ	Fort Lee		2	1	I-95	All tracts with non-truck traffic increases adjacent to I-95 also have truck-traffic proximity increases and are included in Table 17D-15			136,411*	9,431	7%	122,339*	5,770	5%
					Palisades Interstate Pkwy	Community does not have tracts with potential traffic increases adjacent to Palisades Interstate Pkwy			64,897	1,616	2%	64,897	1,068	2%
					N Bergen Blvd (US-46)	All tracts with non-truck traffic increases adjacent to N Bergen Blvd (US-46) also have truck-traffic proximity increases and are included in Table 17D-15			46,580	3,170	7%	Community does not have tracts with potential traffic increases adjacent to N Bergen Blvd (US-46)		
Essex, NJ	Belleville†††	1		1	McCarter Hwy (NJ Rt 21)	45,515	525	1%	45,515	479	1%	45,515	821	2%
	East Orange	3	3	3	Garden State Pkwy	108,539	1,296	1%	108,539	1,252	1%	108,539	1,392	1%
					I-280	95,485	-1,958	-2%	95,485	-1,934	-2%	95,485	-1,702	-2%
	Irvington	6	6	6	Garden State Pkwy	121,204	1,475	1%	121,204	1,128	1%	121,204	1,363	1%
	Newark	1	1	2	Garden State Pkwy	128,342	1,279	1%	128,342	1,126	1%	128,342	1,398	1%
					McCarter Hwy (NJ Rt 21)	Tract with non-truck traffic increases adjacent to McCarter Hwy (NJ Rt 21) also has truck-traffic			42,369	404	1%	42,369	779	2%

COUNTY	COMMUNITY	NUMBER OF TRACTS BY NUMBER OF PRE- EXISTING POLLUTANT (80TH PERCENTILE) OR CHRONIC DISEASE BURDENS (66.66TH PERCENTILE)			HIGHWAY	FINAL EA SCENARIO E			FINAL EA SCENARIO G			ADOPTED TOLL STRUCTURE		
		FINAL EA SCENARIO E	FINAL EA SCENARIO G	ADOPTED TOLL STRUCTURE		DAILY NON-TRUCK NO ACTION (AADT)*	DAILY NON-TRUCK CHANGE (AADT)	DAILY NON-TRUCK CHANGE (%)	DAILY NON-TRUCK NO ACTION (AADT)	DAILY NON-TRUCK CHANGE (AADT)	DAILY NON-TRUCK CHANGE (%)	DAILY NON-TRUCK NO ACTION (AADT)	DAILY NON-TRUCK CHANGE (AADT)	DAILY NON-TRUCK CHANGE (%)
						proximity increases and is included in Table 17D-15								
Union, NJ	Elizabeth§	2	3	3	I-95	115,637	-1,415	-1%	115,637	-379	-0.3%	115,637	-628	-1%
Nassau, NY	Hempstead	1	2	2	Cross Island Pkwy	141,039	-227	-0.2%	141,039	149	0.1%	141,039	234	0.2%
					Nassau Expwy	64,528	117	0.2%	64,528	6	0.01%	64,528	385	1%

Source: U.S. Census Bureau, ACS 2015-2019 5-Year Estimates; USEPA NATA 2017 and Agency Air Quality System 2018 via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

Notes:

Results not shown for the following communities because no tracts appeared in these communities with potential non-truck traffic increases but without potential truck-traffic increases under the adopted toll structure: Crotona–Tremont, Bronx County; High Bridge–Morrisania, Bronx County; Sunset Park, Kings County; Downtown–Heights–Slope, Kings County; Washington Heights–Inwood, New York County; Bayside–Little Neck, Queens County; Port Richmond, Richmond County; Hackensack, Bergen County; Palisades Park, Bergen County; Ridgefield, Bergen County; and Jersey City, Hudson County.

* In some cases, specific tracts with potential traffic increases along a certain highway and within a community and differ between Scenario E, Scenario G, and the adopted toll structure. In these cases, the "No Action" AADT will differ because the section of the highway analyzed differs.

** Under Tolling Scenarios E and G, (as noted on Final EA Tables 17D-12 and 17D-13) as well as the adopted toll structure, Census Tract 435, Bronx County is predicted to have an increase in non-truck traffic proximity; though highways passing through the tract are predicted to see net decreases in non-truck traffic, the center of its population is near a portion of a highway where modeling indicates that non-truck traffic could increase.

*** Under Tolling Scenario E (as noted on Final EA Table 17D-12) and the adopted toll structure, Census Tract 302, Bronx County is predicted to have an increase in non-truck traffic proximity under Tolling Scenario E and the adopted toll structure; though highways adjacent to the tract are predicted to see net decreases in non-truck traffic, the center of its population is near a portion of a highway where modeling indicates that non-truck traffic could increase.

† Under the adopted toll structure, Census Tract 243.02, New York County, could see in increase in non-truck traffic proximity, even though AADT is predicted to decrease. Though the highway adjacent to the tract is predicted to see decreases in non-truck traffic, the center of its population is near a portion of the highway where modeling indicates that non-truck traffic could increase.

†† Under Tolling Scenarios E and G (as noted in Final EA Tables 17D-12 and 17D-13), Census Tract 306, Queens County is predicted to have an increase in non-truck traffic proximity; though highways passing through the tract are predicted to see net decreases in non-truck traffic, the center of its population is near a portion of a highway where modeling indicates that non-truck traffic could increase.

††† As noted in Final EA Table 17D-12, under Tolling Scenario E, Tract 144, Essex County has a small potential increase in truck traffic that produces a potential truck-traffic proximity change of less than one truck per meter distance.

§ Under Scenarios E & G (as noted in Final EA Tables 17D-12 and 17D-13) as well as under the adopted toll structure, non-truck traffic proximity is predicted to increase in these census tracts, even though AADT is predicted to see a net decrease; the centers of population in each of the three tracts are closer to portions of the highway where modeling indicates non-truck traffic proximity could increase.

Regional and Place-Based Mitigation

As noted in the Final EA and above, the Project Sponsors will implement regional and place-based mitigation measures to potential Project-related traffic diversions, related air pollutants, and associated health effects in communities that are already overburdened by pre-existing air pollution and chronic diseases, relative to national percentiles. **Table 17.13**, below, shows the mitigation measures committed to by the Project Sponsors with the funding amounts committed to in the Final EA as well as the funding amounts committed to with the adopted toll structure.

Table 17-12. Regional and Place-Based Mitigation Measures

MITIGATION MEASURES	BENEFIT AND RESULT OF MITIGATION	RELEVANT LOCATION(S)	IMPLEMENTATION LEAD	FUNDING SOURCE	5-YEAR FUNDING[1]	
					FINAL EA	ADOPTED TOLL STRUCTURE
Regional Mitigation						
Further reduced overnight toll	Minimize/avoid truck diversions	10-county environmental justice study area	TBTA	CBD Tolling Program	$30 million	$123 million
Expand NYC Clean Trucks Program	NOx and $PM_{2.5}$ reductions from ~500 new clean trucks		NYCDOT	CBD Tolling Program	$20 million	$20 million
Expand NYCDOT Off-Hours Delivery Program	Safety and emissions reduction benefits resulting from reduced truck traffic during the day		NYCDOT	CBD Tolling Program	$5 million	$5 million
Place-Based Mitigation						
Toll vehicles traveling northbound on the FDR Drive that exit at East Houston Street and then travel southbound on FDR Drive	25 to 35 percent of the non-truck traffic increases on the FDR Drive could be mitigated	FDR Drive between the Brooklyn Bridge and East Houston Street	TBTA	N/A	N/A	N/A
Replacement of Transport Refrigeration Units (TRUs) at Hunts Point Produce Market	Major NOx and $PM_{2.5}$ reductions from the replacement of up to 1,000 TRUs	Hunts Point	NYCDOT	CBD Tolling Program[2]	$15 million[2]	$15 million[2]
Implement Electric Truck Charging Infrastructure	NOx and $PM_{2.5}$ reductions from electric vehicles using 35 new chargers (at seven stations)	See "Benefits and Allocation of Funding for Mitigation Measures," below	NYSDOT	$10 million Federal CRP + $10 million CBD Tolling Program	$20 million	$20 million
Install Roadside Vegetation to Improve Near-Road Air Quality	Improves near-road air quality by pollutant capture from ~4,000 trees and ~40,000 shrubs		TBTA with Relevant State and Local Agencies	CBD Tolling Program	$10 million	$10 million
Renovate Parks and Greenspace in Environmental Justice Communities	Increases overall community well-being. 2-5 park/ greenspace renovations depending on size and complexity.		TBTA with Relevant State and Local Agencies	CBD Tolling Program	$25 million	$25 million
Install Air Filtration Units in Schools Near Highways	Removes air pollutants from classrooms. 25-40 schools depending on school size and complexity of existing HVAC system.		TBTA with Relevant State and Local Agencies	CBD Tolling Program	$10 million	$10 million
Establish Asthma Case Management Program and Bronx Center	Reduces hospitalizations and doctor visits, decreases days and nights with symptoms and missed school days – program expansion up to 25 schools		NYC DOHMH	CBD Tolling Program	$20 million	$20 million

Notes:
1 An additional $5 million has been allocated for mitigation and enhancement measures related to monitoring across other topics, along with $82 million for the low-income toll discount. Enhancement measures include air quality monitoring that will expand NYC's existing monitoring network. Locations have been selected in consideration of the traffic and air quality analyses in the Final EA and in coordination with environmental justice stakeholders and relevant state and local agencies. This will complement the regional and place-based mitigation measures related to traffic diversions outlined here.
2 In the Final EA, MTA CMAQ funds were identified for replacement of TRUs at Hunts Point Produce Market; the source has changed, but not the amount of funding; after three years, any remaining funds designated for TRU replacements may also be used for clean truck replacement vouchers through the NYC Clean Trucks Program.

Benefits and Allocation of Funding for Mitigation Measures

Benefits of Regional Mitigation Measures

Regionwide, 151 census tracts have been identified for having potential truck traffic proximity increases, and for being in the 90th percentile for at least one pre-existing pollutant burden OR in the 90th percentile for at least one pre-existing chronic disease burden. These tracts will benefit from the commitments to regional mitigation measures. Under the adopted tolling structure, a total of $148M has been dedicated to these regional mitigation measures. This commitment includes:

- $123M to deeply discount the overnight toll
- $20M to expand the NYC Clean Trucks Program
- $5M to expand the NYCDOT Off-Hours Delivery Program

Discounted Overnight Toll[17]

Without a discounted overnight toll, some drivers might divert to other routes to avoid the toll. The discounted overnight toll would benefit communities along diversion routes, including EJ communities, as drivers are less likely to divert due to the discounted rate. Additionally, all drivers entering the CBD during the overnight period would benefit from the lower toll. Specifically, the distribution of drivers into the CBD during the overnight period from each crossing that would benefit from the discounted toll is as follows[18]:

- 39.4% from vehicles crossing into the CBD from 60th Street
- 24.3% from vehicles crossing into the CBD from Brooklyn
- 18.8% from vehicles crossing into the CBD from New Jersey
- 17.5% from vehicles crossing into the CBD from Queens

Expansion of NYC Clean Trucks Program

Trucks with more than 70% of their Vehicle-Miles Traveled in the tri-state (NY/NJ/CT) area are eligible for funding to replace old diesel trucks to lower-emission electric, hybrid, compressed natural gas, and clean diesel vehicles. This commitment would result in reduced emissions across the entirety of the replacement trucks' trips, through communities throughout the region, including those environmental justice communities with preexisting burdens that could have increased ruck traffic proximity as a result of the adopted tolling structure.

Expansion of NYCDOT Off-Hours Delivery Program

NYCDOT will expand its off-hours delivery program to reduce daytime truck traffic, reduce emissions, and increase roadway safety. This program focuses on shifting truck deliveries from peak periods to off-hours. It is available to all users and would result in a reduction of truck trips during daytime hours on access routes from any origin.

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[17] The adopted toll structure includes an overnight toll discounted beyond the mitigation commitment in the Final EA. The overnight E-ZPass rate is 25% of the peak toll rate from 9 pm – 5 am weekdays and 9 pm – 9 am weekends.
[18] See Appendix 4A.2, Table 4A.2-3, p. Appendix 4A.2-6

Allocation of Place-Based Mitigation Funding by Community

The Final EA concluded that specific census tracts that would experience increased or decreased traffic proximity changed depending on the tolling scenario, but that the affected communities remain largely the same. Under the adopted toll structure, the affected census tracts and communities have been identified, confirming that the same communities would be affected as predicted in the Final EA. With the completion of this analysis for the adopted toll structure, as contemplated by the Final EA and FONSI, the Project Sponsors have refined the allocation of place-based mitigation funds as outlined in Final EA Table 17-16, which commits a total of $100M to place-based mitigation measures. This includes:

- $15M for the Replacement of Transport Refrigeration Units (TRUs) at Hunts Point Produce Market
- $20M to Implement Electric Truck Charging Infrastructure
- $10M to Install Roadside Vegetation
- $25M to Renovate Parks and Greenspace
- $10M to Install Air Filtration Units in Schools Near Highways
- $20M to Establish an Asthma Case Management Program and Bronx Center

To determine how the $100M should be allocated across communities, the share of population in all affected tracts was used, as illustrated in **Table 17.13**.

Table 17.13. Place-Based Mitigation Measures Funding Allocation

COUNTY	COMMUNITY IDENTIFIED FOR PLACE-BASED MITIGATION	TOTAL POPULATION	SHARE OF POPULATION IN ALL AFFECTED TRACTS	ALLOCATED FUNDS
Bronx, NY	Crotona - Tremont	51,133	22.6%	$22.6M
	High Bridge - Morrisania	20,884	9.2%	$9.2M
	Hunts Point - Mott Haven	42,621	18.9%	$18.9M
	Northeast Bronx	9,912	4.4%	$4.4M
	Pelham - Throgs Neck	37,608	16.6%	$16.6M
Kings, NY	Downtown Brooklyn–Fort Greene*	12,819	5.7%	$5.7M
	South Williamsburg**	16,807	7.4%	$7.4M
New York, NY	East Harlem	9,968	4.4%	$4.4M
	Randall's Island***	2,009	0.9%	$0.9M
Bergen, NJ	Fort Lee	3,159	1.4%	$1.4M
Essex, NJ	City of Orange	1,925	0.9%	$0.9M
	East Orange	4,124	1.8%	$1.8M
	Newark	12,982	5.7%	$5.7M

* As noted in Final EA, Appendix D to Appendix 17D, Part of the Downtown–Heights–Slope UHF neighborhood but labelled "Downtown Brooklyn-Fort Greene" to further specify location.

** As noted in Final EA, Appendix D to Appendix 17D, Part of the Greenpoint UHF neighborhood, but labeled as "South Williamsburg" to further specify location.

*** As noted in Final EA, Appendix D to Appendix 17D, part of the East Harlem UHF neighborhood, but labeled as "Randall's Island" to further specify location.

As outlined in the Final EA, several of the six mitigation strategies have been targeted to specific communities, as follows:

- Replacement of Transport Refrigeration Units (TRUs) at Hunts Point Market. In the Final EA, the amount allocated for this mitigation measure is $15M; as noted above, this community in the Bronx is eligible for $18.9M of the place-based mitigation funding.
- Implementation of electric charging infrastructure will be implemented through the Federal Carbon Reduction Program (CRP) using funds received by NYSDOT and will, therefore, be limited to locations in New York. However, given that 4.8% of the trucks with destinations in New York City, come from or pass through New Jersey on a daily basis, NJ communities will benefit from this mitigation. Thus, of the $20M allocated for this, NJ will have a benefit of roughly $1.0M related to this mitigation measure. However, as the benefits would be most concrete where charging infrastructure is located, this benefit is not deducted from allocations to New Jersey communities.
- Expansion of the existing NYC Asthma Care Management Program and a Bronx Asthma Center, which will occur throughout New York City and in the Bronx, respectively. In the Final EA, the amount allocated for this combination mitigation measure is $20M; the Bronx communities in total are eligible for $71.8M, and New York City communities combined are eligible for $90.2M, inclusive of the $71.8M.

All communities are eligible for the remaining three mitigation strategies – installation of roadside vegetation, renovation of parks and greenspace, and installation of air filtration units in schools near highways. Together, the financial commitment for these strategies totals $45M.

As outlined in the Final EA, Project Sponsors will engage with the Environmental Justice Community Group (EJCG), relevant communities that merit place-based mitigation, and local implementing agencies to determine which of the specific place-based mitigation measures as described above are appropriate for each community within the allocated funds, and exactly where they should be sited.

The siting process will comply with all commitments made in the Final EA, be transparent to interested stakeholders including the general public, press, and elected officials, and ensure the projects are additive (i.e. not already funded and announced work). The specific site selection methodology for place-based mitigation is described below.

1. Analyze Existing Conditions in Communities and Assess Suitability of Mitigation Measures

   For the identified communities, publicly available data relevant to the suitability of each type of place-based mitigation measure will be collected. Preliminary data and information to be collected will depend on the availability of data sets; additional data will be included as identified and

appropriate. Additional data may also be collected from other relevant agencies during this step, such as information related to relevant planned and programmed projects.

Geospatial analysis will be performed to determine the suitability of each mitigation measure for a given community, as well as consideration of the location of mitigation measures for which the location has been determined (i.e., Hunt's Point Produce Market TRUs). For example, in communities where only one mitigation measure is feasible, that mitigation will be sited in that community and the distribution of the remaining mitigation measures will consider this.

2. Engage the Environmental Justice Community Group

   Engage EJCG to solicit feedback on MTA's approach to the site-selection process. The Project Sponsors will walk through the approach, providing details on what has been done to date. The EJCG will have the opportunity to provide input for the next phase of site selection refinement.

3. Engage with Relevant Agencies to Refine Analysis and Identify Specific Potential Sites

   Meet with relevant agencies to review the initial suitability analysis and identify other factors that may influence site selection such as implementation approach, needs assessments, and other feasibility factors.

4. Refine Analysis and Mapping of Potential Sites and Ensure an Equitable Distribution of Mitigation Measures

   Refine analysis to incorporate feedback from the EJCG and the relevant agencies. Specific potential sites, cost of implementation at those sites, and the funding allotment for each mitigation measure will also be considered in this step, ensuring that the mitigation funding is spread equitably throughout the communities, as outlined in Table X.A.

5. Develop and Present Draft Mitigation Plan

   Develop a Draft Mitigation Plan that includes the proposed locations for each mitigation measure as well as the proposed allocated funds for each location. The Draft Mitigation Plan will be presented to relevant agencies, the EJCG, local officials, and other relevant community stakeholders for review and comment.

6. Finalize Mitigation Plan

   A Final Mitigation Plan will be prepared that reflects feedback received on the Draft Mitigation Plan. This plan will be used as the roadmap for developing and finalizing MOUs and funding agreements with the Project Sponsors and other agencies. As work progresses, if there are impediments to proceeding with a given site, data and analysis from this process will be revisited and potential alternative sites will be identified using a similar process.

CONCLUSION

The Final EA considered the effects of the Project on environmental justice populations, including local neighborhood effects and regional effects related to mobility and changes in travel patterns. It included a supplemental analysis for the Final EA of Project effects related to increases or decreases in traffic and truck traffic as a result of traffic diversions in communities already highly burdened by pre-existing air pollution and chronic diseases. For the reevaluation, the Project Sponsors considered the effects of the adopted toll structure for these same topics, using results from the BPM incorporating the adopted toll structure. The reevaluation concludes that with the implementation of the mitigation commitments of the Final EA and FONSI, the adopted toll structure would not result in disproportionately high and adverse effects on environmental justice populations or communities and no new mitigation is needed. In addition, there is no change in the communities for which place-based mitigation will be implemented. The conclusions of the Final EA with respect to environmental justice remain valid.

Table 17.14 presents information from the Final EA Table ES-5 summarizing the conclusions related to environmental justice, now modified to include the adopted toll structure.

Table 17.14 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
17 – Environmental Justice	Low-income drivers	The EA as published in August 2022 found the increased cost to drivers with the new CBD toll would disproportionately affect low-income drivers to the Manhattan CBD who do not have a reasonable alternative for reaching the Manhattan CBD. With further analysis of the population affected and the addition of new mitigation, the Final EA concludes there would not be a disproportionately high and adverse effect on low-income drivers.	28-county study area	Narrative	The increased cost to drivers would occur under all tolling scenarios.							Yes	**Mitigation needed.** The Project will include a tax credit for CBD tolls paid by residents of the Manhattan CBD whose New York adjusted gross income for the taxable year is less than $60,000. TBTA will coordinate with the New York State Department of Taxation and Finance (NYS DTF) to ensure availability of documentation needed for drivers eligible for the NYS tax credit. TBTA will post information related to the tax credit on the Project website, with a link to the appropriate location on the NYS DTF website to guide eligible drivers to information on claiming the credit. TBTA will eliminate the $10 refundable deposit currently required for E-ZPass customers who do not have a credit card linked to their account, and which is sometimes a barrier to access. TBTA will provide enhanced promotion of existing E-ZPass payment and plan options, including the ability for drivers to pay per trip (rather than a pre-loaded balance), refill their accounts with cash at participating retail locations, and discount plans already in place, about which they may not be aware. TBTA will coordinate with MTA to provide outreach and education on eligibility for existing discounted transit fare products and programs, including those for individuals 65 years of age and older, those with disabilities, and those with low incomes, about which many may not be aware. The Project Sponsors commit to establishing an Environmental Justice Community Group that will meet on a quarterly basis, with the first meeting taking place prior to Project implementation, to share updated data and analysis and hear about potential concerns. As it relates to environmental justice, the Project Sponsors will continue providing meaningful opportunities for participation and engagement by sharing updated data and analysis, listening to concerns, and seeking feedback on the toll setting process. TBTA will ensure the overnight toll for trucks and other vehicles is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m. in the final CBD toll structure; this will benefit low-income drivers who travel during that time. For five years, TBTA commits to a Low-Income Discount Plan for low-income frequent drivers who will benefit from a 25 percent discount on the full CBD E-ZPass toll rate for the applicable time of day after the first 10 trips in each calendar month (not including the overnight period, which will already be deeply discounted). **Enhancement** TBTA will coordinate with MTA NYCT to improve bus service in areas identified in the EA as the Brooklyn and Manhattan Bus Network Redesigns move forward.	Incorporating the identified mitigation, no disproportionately high and adverse effect would occur on low-income drivers.	No (with identified mitigation)	No change in identified mitigation needed. The adopted toll structure incorporates and expands the mitigation commitments of the Final EA and FONSI. The adopted toll structure includes an overnight toll for trucks and other vehicles at 25 percent of the peak toll from 9 p.m. to 5 a.m. on weekdays and 9 p.m. to 9 a.m. on weekends The adopted toll structure commits, for five years to a Low-Income Discount Plan for low-income frequent drivers who will benefit from a 50 percent discount on the full CBD E-ZPass toll rate for the applicable time of day after the first 10 trips in each calendar month (not including the overnight period, which will already be deeply discounted).

Draft, Privileged and Confidential – for discussion purposes only; data still being assessed.

Table 17.13- Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
17 – Environmental Justice	Taxi and FHV drivers	The EA as published in August 2022 found a potential disproportionately high and adverse effect would occur to taxi and FHV drivers in New York City, who largely identify as minority populations, in tolling scenarios that toll their vehicles more than once a day. This would occur in unmodified Tolling Scenarios A, D, and G; for FHV drivers, it would also occur in Tolling Scenarios C and E. The adverse effect would be related to the cost of the new CBD toll and the reduction of VMT for taxis and FHVs, which would result in a decrease in revenues that could lead to losses in employment. With the addition of new mitigation, the Final EA concludes there would not be a disproportionately high and adverse effect on taxi and FHV drivers.	New York City	Narrative	Potential adverse effect would occur in Tolling Scenarios A, D, and G, which would not have caps or exemptions for taxis and FHV drivers.							Yes	**Mitigation needed.** TBTA will ensure that a toll structure with tolls of no more than once per day for taxis or FHVs is included in the final CBD toll structure.	No disproportionately high and adverse effect would occur on New York City taxi and FHV drivers with the adopted toll structure, which includes a per-trip toll on trips to, within, or from the CBD of $1.25 for taxis and $2.50 for FHVs. These per-trip tolls are equivalent to the once per day toll for passenger vehicles included as part of the adopted toll structure.	No	**No mitigation needed.**
				Change in daily taxi/FHV VMT with passengers in the CBD relative to No Action Alternative: Scenarios included in EA	-21,498 (-6.6%)	+15,020 (+4.6%)	-11,371 (-3.5%)	-54,476 (-16.8%)	-25,621 (-7.9%)	+4,962 (+1.5%)	-27,757 (-8.6%)			-904 (-0.3%)		
				Net change in daily taxi/FHV trips to CBD relative to scenarios included in EA: Additional analysis to assess effects of caps or exemptions	Tolls capped at 1x / Day: +2%	—	—	Tolls capped at 1x / Day: +3% Exempt: +50%	—	—	Tolls capped at 1x / Day: +2%			NA		

Draft, Privileged and Confidential – for discussion purposes only; data still being assessed.

Table 17.13 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
17 – Environmental Justice (Cont'd)	Increases or decreases in traffic, as a result of traffic diversions, in communities already overburdened by pre-existing air pollution and chronic diseases	Certain environmental justice communities would benefit from decreased traffic; some communities that are already overburdened by pre-existing air pollution and chronic diseases could see an adverse effect as a result of increased traffic.	The specific census tracts that would experience increased or decreased traffic change slightly depending on the tolling scenario. The following communities could have census tracts that merit place-based mitigation: High Bridge–Morrisania, Crotona–Tremont, Hunts Point–Mott Haven, Pelham–Throgs Neck, Northeast Bronx, East Harlem, Randall's Island, Lower East Side/Lower Manhattan, Downtown Brooklyn–Fort Greene, South Williamsburg, Orange, East Orange, Newark, and Fort Lee.	Narrative	Census tracts with pre-existing air pollutant and chronic disease burdens that would benefit from reduced traffic, and those affected by increased traffic would vary somewhat, but the identified communities remain largely the same across tolling scenarios. Under Tolling Scenario G, Fort Lee would not experience increases.							Yes	**Mitigation needed.** **<u>Regional Mitigation</u>** TBTA will ensure the overnight toll for trucks and other vehicles is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m. in the final toll structure; this will reduce truck diversions. YCDOT will expand the NYC Clean Trucks Program to accelerate the replacement of eligible diesel trucks, which travel on highways in certain environmental justice communities where the Project is projected to increase truck traffic, to lower-emission electric, hybrid, compressed natural gas, and clean diesel vehicles. YCDOT will expand its off-hours delivery program in locations where the Project is projected to increase truck diversions to reduce daytime truck traffic and increase roadway safety in certain environmental justice communities. **<u>Place-based Mitigation</u>** TBTA will toll vehicles traveling northbound on the FDR Drive that exit at East Houston Street and then turn to immediately travel south on FDR Drive; this ill mitigate modeled non-truck traffic increases on the FDR Drive between the Brooklyn Bridge and East Houston Street. YCDOT will coordinate to replace diesel-burning TRUs at Hunts Point with cleaner vehicles. YSDOT will coordinate to expand electric truck charging infrastructure. The Project Sponsors will coordinate to install roadside vegetation to improve near-road air quality. The Project Sponsors will renovate parks and greenspaces. The Project Sponsors will install or upgrade air filtration units in schools. The Project Sponsors will coordinate to expand existing asthma case management programs and create new community-based asthma programming through a neighborhood asthma center in the Bronx.	Census tracts with pre-existing air pollutant and chronic disease burdens that would benefit from reduced traffic, and those affected by increased traffic vary somewhat from the Final EA, as anticipated. The communities that merit place-based mitigation remain the same as those identified in the Final EA and allocations of place-based mitigation funds have been made for each as follows: Crotona–Tremont, $22.6m; High Bridge–Morrisania, $9.2m; Hunts Point–Mott Haven, $18.9m; Northeast Bronx, $4.4m; Pelham–Throgs Neck, $16.6m; Downtown–Heights–Slope (Downtown Brooklyn–Fort Greene), $5.7m; Greenpoint (South Williamsburg), $7.4m; East Harlem, $4.4m; Randall's Island, $0.9m; Fort Lee, $1.4m; City of Orange, $0.9m; East Orange, $1.8m; and Newark, $5.7M. (See Note 1.). TBTA's place-based mitigation for Union Square - Lower East Side (Lower East Side) has no associated cost.	Yes	**No additional mitigation needed.** The Project Sponsors will implement the mitigation commitments of the Final EA and FONSI (listed under "Mitigation and Enhancements" in this table).

Note:

1 Based on analysis of the adopted toll structure, communities and census tracts where place-based mitigation measures will be implemented have been confirmed – the specific siting of mitigation measures is being determined through analysis of data on needs and feasibility and coordination among the Project Sponsors, the Environmental Justice Community Group (representing the 10-county environmental justice study area), and relevant stakeholders and implementing agencies; see "**Benefits and Allocation of Funding for Mitigation Measures**," above.

OVERALL PROJECT ENHANCEMENT. The Project Sponsors commit to ongoing monitoring and reporting of potential effects of the Project, including for example, traffic entering the CBD, vehicle-miles traveled in the CBD; transit ridership from providers across the region; bus speeds within the CBD; air quality and emissions trends; parking; and Project revenue. Data will be collected in advance and after implementation of the Project. A formal report on the effects of the Project will be issued one year after implementation and then every two years. In addition, a reporting website will make data, analysis, and visualizations available in open data format to the greatest extent practicable. Updates will be provided on at least a bi-annual basis as data becomes available and analysis is completed. This data will also be used to support an adaptive management approach to monitoring the efficacy of mitigation, and adjustments as warranted.

18 Agency Coordination and Public Participation

Chapter 18 of the Final EA described agency coordination and public participation activities for the Project. This section of the reevaluation describes the agency coordination and public participation activities following the Final EA, including outreach already conducted and coordination that will continue following completion of this reevaluation.

FINAL EA AND FONSI COMMITMENTS

The FONSI included commitments related to ongoing engagement and coordination. The following describes progress on those commitments.

Small Business Working Group

In the Final EA (see page 6-69 in Chapter 6), the Project Sponsors committed to establishing a Small Business Working Group. The purpose of this group is to share information about implementation of the Project and findings from evaluating the effects of the Project, and to solicit ongoing input on how small businesses are being affected. Actions related to this commitment have already begun; the first meeting of this group was held virtually on January 22, 2024.

The Project Sponsors invited representatives from business organizations and business improvement districts (BIDs) operating in and near the Manhattan CBD to participate in the Small Business Working Group, and representatives from 21 organizations attended the first meeting in January 2024. **Table 18.1** shows the groups invited to attend and those with representatives who attended. In this initial meeting, the Project Sponsors presented an overview of the Project, the proposed toll structure, and information on the Project's benefits and potential effects on businesses in the Manhattan CBD. After the presentation, the meeting included a discussion in which participants asked questions and raised concerns. Comments and concerns predominantly related to the need for ongoing communication with small business owners and the effect of congestion pricing on residents of the CBD.

As committed to, the second meeting of the Small Business Working Group will be held six months after Project implementation, and additional meetings will be held annually thereafter.

Table 18.1 – Small Business Working Group Invitations and Attendance at January 2024 Meeting

GROUP INVITED TO ATTEND	ATTENDANCE	GROUP INVITED TO ATTEND	ATTENDANCE
34th Street Partnership	Attended	Lincoln Square BID	Attended
47th Street BID (Diamond District Partnership)	Invited	Lower East Side BID	Attended
Alliance for Downtown New York	Attended	Manhattan Chamber of Commerce	Attended
Bryant Park Corporation	Attended	Madison Avenue BID	Attended
Chinatown BID	Attended	Meatpacking District BID	Attended
East Midtown Partnership	Attended	NoHo NY BID	Attended
Fifth Avenue Association	Attended	SoHo Broadway Initiative	Attended
Flatiron NoMad Partnership	Attended	Times Square Alliance	Attended
Garment District Alliance	Attended	Union Square Partnership	Attended
Grand Central Partnership	Attended	Village Alliance	Attended
Hudson Square BID	Attended	West Village BID	Invited
Hudson Yards Hell's Kitchen Alliance	Attended		

Environmental Justice Community Group

In the Final EA (see page 17-71 and Table 17-18, page 17-78 in Chapter 17), the Project Sponsors committed to establishing an Environmental Justice Community Group to share updated data and analysis and hear about potential environmental justice-related concerns. The Project Sponsors have initiated this commitment; first meeting of this group was held virtually on February 22, 2024.

To form the new Environmental Justice Community Group, the Project Sponsors invited members of the Environmental Justice Technical Advisory Group established during the NEPA process as well as representatives of additional environmental justice organizations to join the new group. (As described in Chapter 17 of the Final EA, Section 17.9.2 on page 17-84, the Environmental Justice Technical Advisory Group consisted of community leaders, advocacy groups, industry groups, and community members from the regional study area with expertise in environmental justice considerations, with 16 groups represented.) **Table 18.2** shows the groups invited to attend the first Environmental Justice Community Group meeting and those with representatives who attended.

As shown in **Table 18.2**, representatives from 12 organizations attended the first meeting in February 2024. At that meeting, the Project Sponsors presented an overview of the Project, the proposed toll structure, a history of environmental engagement for the Project to date, the mitigation commitments made during the NEPA process and the commitments to environmental justice communities, and a timeline for future actions. After the presentation, the meeting included a discussion in which participants asked questions and raised concerns. Comments and concerns predominantly related to potential traffic diversions, place-based mitigation, and future capital projects.

Table 18.2 – Environmental Justice Community Group Invitations and Attendance at February 2024 Meeting

GROUP INVITED TO ATTEND	ATTENDANCE	GROUP INVITED TO ATTEND	ATTENDANCE
ALIGN	Invited	New York City Environmental Justice Alliance	Attended
American Indian Community House	Invited	New York Urban League	Invited
Asian American Federation	Attended	Northern New Jersey Community Foundation	Attended
Chhaya	Invited	The Point Community Development Corporation	Attended
Community Voices Heard	Invited; Declined	Riders Alliance	Invited
El Puente	Attended	South Bronx Unite	Attended
ERASE Racism New York	Attended	South Ward Environmental Alliance	Invited
GOLES (Good Old Lower East Side)	Attended	Staten Island Urban Center	Attended
Hispanic Federation	Invited	United Jewish Organizations of Williamsburg and North Brooklyn	Attended
The HOPE Program (formerly Sustainable South Bronx)	Invited	UPROSE	Attended
Ironbound Community Corporation	Invited; Declined	Urban Indigenous Collective	Invited
Make the Road New York	Invited	Urban League of Bergen County	Invited
NAACP – Long Island Region	Invited	Urban League of Essex County	Invited
NAACP – Metropolitan Council Region, NY	Invited	Urban League of Hudson County	Invited
NAACP – NJ State Conference	Invited	Urban League of Union County	Attended
National Action Network	Invited	WE ACT for Environmental Justice	Invited
Neighborhood Initiatives Development Corporation	Invited	WE STAY / Nos Quedamos	Invited
New Jersey Environmental Justice Alliance	Invited	Youth Ministries for Peace and Justice	Invited

As committed to in the Final EA and FONSI, the Project Sponsors will continue coordination and meetings with the Environmental Justice Community Group on a quarterly basis.

Other Outreach Related to Environmental Justice Commitments

In addition to the Environmental Justice Community Group, the Final EA and FONSI also described that the Project Sponsors will continue providing meaningful opportunities for participation and engagement related to the concerns of environmental justice communities by sharing updated data and analysis and listening to concerns. In addition, as described in Section 17 of this reevaluation, the Project Sponsors will conduct additional coordination with the Environmental Justice Community Group and the relevant communities receiving place-based mitigation related to environmental justice concerns.

Education/Outreach on Discounted Transportation Options

The Final EA described TBTA's commitment to conduct enhanced outreach related to discounts and low-cost options for transit fares and tolls (see pages 17-71 and 17-78 in Chapter 17). This included the following:

- Education/outreach/coordination on the tax credit available for low-income residents of the Manhattan CBD
- Enhanced promotion of existing E-ZPass payment and plan options
- Education and outreach on existing discounted transit fare products and programs

TBTA is currently developing multiple tools for implementing the enhanced outreach commitments described in the Final EA, which will include both in-person and digital outreach methods. This will include outreach through TBTA's extensive network of E-ZPass customers and in-person distribution of information throughout MTA's service area to spread information and awareness.

[ADDITIONAL INFORMATION TO COME AS OUTREACH IS COMPLETED]

Ongoing Coordination Related to Construction

The Final EA described the Project Sponsors' commitments related to coordination during construction (see Section 18.3.5 on page 18-8 in Chapter 18). The commitment included developing and implementing a specific construction communications plan and implement it to inform affected road users, area residences and businesses, appropriate agencies, and the public about anticipated construction activities, including their schedule and duration, and any potential roadway or lane closures, sidewalk closures or other impacts to pedestrians, commuter alternatives, and any potential temporary impacts on traffic during construction.

Construction for the Project began in July 2023. Prior to the start of construction, on July 12, 2023, the Project Sponsors presented a construction briefing to affected community boards, business improvement districts, and elected officials. Once construction began, the Project Sponsors sent weekly construction bulletins to the same group describing planned work sites, the duration and scope of the work, and any potential temporary traffic impacts. In addition, the Project Sponsors held targeted meetings with members of the public related to construction activities, related impacts to business operations and potential aesthetic changes to the infrastructure. The Project contractor maintained an outreach email address and phone line to field comments and concerns during construction.

OTHER OUTREACH AND COORDINATION

In addition to these commitments, as part of the larger effort to educate the public and conduct outreach, TBTA has, upon invitation, participated in the following public meetings, where representatives provided an overview of the Project and answered questions from event organizers and attendees:

- Waterside Plaza Tenants Association and local elected officials on October 18, 2023
- Manhattan Community Board 3 Transportation Committee on November 14, 2023
- Hotel Association of New York to address concerns specific to the industry on January 22, 2024
- Brooklyn Community Board 7 Transportation Committee on January 29, 2024
- Manhattan Community Board 6 Transportation Committee on February 5, 2024
- Lower East Side Congestion Pricing Town Hall with elected officials on February 8, 2024
- Tribeca Congestion Pricing Town Hall with elected officials on February 15, 2024
- Interested students from Queens College, City University of New York, on February 27, 2024
- New York City Small Business Services Small Business Advisory Group, in March 2024

19 Section 4(f) Evaluation

Chapter 19 of the Final EA presented FHWA's Final Section 4(f) Evaluation for the CBD Tolling Program, conducted in compliance with Section 4(f) of the Department of Transportation Act of 1966 (now 49 USC Section 303 and 23 USC Section 138; U.S. Department of Transportation [USDOT] Act). As described there, the Section 4(f) Evaluation considered the Project's potential Section 4(f) use, as defined by Section 4(f), of historic sites and publicly owned parks related to installation of new tolling infrastructure and tolling system equipment, including new signage.

The Final EA presented FHWA's findings that the CBD Tolling Alternative would not result in a use of Section 4(f) properties except for the High Line and Central Park. Following consideration of public input received during the public comment period, FHWA concluded the CBD Tolling Alternative would have a *de minimis* impact on the High Line and Central Park.

The adopted toll structure would use the same tolling system equipment and infrastructure described and evaluated in the Final EA and Final Section 4(f) Evaluation. Consequently, the conclusions of the Final EA with respect to Section 4(f) remain valid and no further analysis is needed.

CONCLUSION

After consideration of the effects of the proposed construction activities and permanent installation of tolling infrastructure and tolling system equipment, FHWA concluded that the CBD Tolling Alternative would not result in a use of Section 4(f) properties except for the High Line and Central Park, and that the Project would have a *de minimis* impact on the High Line and Central Park. The adopted toll structure would have the same construction activities and the same tolling infrastructure and tolling system equipment described and evaluated in the Final EA. Consequently, the conclusions of the Final EA related to Section 4(f) remain valid.

Other Analyses: Short-Term Uses of the Environment and Maintenance and Enhancement of Long-Term Productivity (EA Chapter 20), Irreversible and Irretrievable Commitment of Resources (EA Chapter 21)

The two chapters represented here—short-term uses of the environment and maintenance and enhancement of long-term productivity, and irreversible and irretrievable commitment of resources—describe the temporary effects during construction in relation to the long-term benefits of the Project and the resources that must be committed to achieve the Project. The adopted toll structure will use the same tolling infrastructure and tolling system equipment described and evaluated in the Final EA, and therefore the short-term effects during construction and resources that must be committed remain unchanged. With the adopted toll structure, the Project benefits are consistent with those described in the Final EA, including reduced vehicular congestion in the Manhattan CBD, improved regional air quality, and creation of a new local, recurring funding source for MTA capital projects. Consequently, the conclusions of the Final EA for these analysis areas remain valid and no further analysis is needed.

Memorandum: Central Business District Tolling Program (CBDTP) Air Quality Analyses for Final EA and Reevaluation

April 12, 2024

Introduction

This memorandum describes the methodology used in the Final EA and reevaluation for the mesoscale analysis of air quality and how that methodology is consistent in the use of the Best Practice Model (BPM) and with FHWA's published guidance for assessing and reassessing the effects of the Project.[1] All traffic and air quality analyses were based on vehicle-related outputs from the BPM that was developed specifically for this Project, as is standard protocol for modeling large-scale transportation initiatives. The same BPM was used for the Final EA and the reevaluation.

For the Final EA's consideration of regional air quality effects and to support the transportation conformity determination that was being made by the New York Metropolitan Transportation Council (NYMTC) at the time work on the EA for the Project commenced, BPM output of vehicle-miles traveled (VMT) was adjusted in coordination with NYMTC. This adjustment is referred to as "post-processing" and is needed to determine regional transportation conformity according to NYMTC's standard procedure for projects that are not yet included in the region's Transportation Improvement Program (TIP), as was the status of this project at the time of the EA analysis.[2]

Transportation conformity is required by the Clean Air Act section 176(c) (42 U.S.C. 7506(c)) to ensure that federal funding and approval are given to highway and transit projects that are consistent with ("conform to") the air quality goals established by a state air quality implementation plan (SIP)[3]. The bullets below detail why this process needs to be done.

- The purpose of transportation conformity is to ensure that Federal funding and approval are given to activities that are consistent with air quality goals[4].
- Conformity requirements apply in nonattainment and maintenance areas; the NYMTC region is nonattainment for ozone and maintenance for fine particulate matter ($PM_{2.5}$).
- A motor vehicle emissions budget (MVEB) is the portion of the total allowable emissions in the area allocated to highway and transit vehicle use and emissions, as defined in the SIP.
- The budget establishes a cap on emissions that cannot be exceeded by estimated highway and transit vehicle emissions.

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1 FHWA. Transportation Conformity, Linking Transportation and Air Quality. FHWA-HEP-10-030. https://www.fhwa.dot.gov/Environment/air_quality/conformity/con_broc.pdf.

2 As noted in FHWA guidance, prior to the first time a non-exempt Federal project is adopted, accepted, approved, or funded, project-level conformity must be determined.

3 EPA General Information on Transportation and Conformityhttps://www.epa.gov/state-and-local-transportation/general-information-transportation-and-conformity

4 FHWA. Transportation Conformity Self-Directed Training. https://connectdot.cosocloud.com/transportation_conformity_overview

- The BPM's roadway/highway outputs must undergo a series of adjustments to calculate the regional VMT and speeds before emission rates can be applied to generate the required emissions estimates for conformity analysis. These adjustments include the following:
  - BPM data represents an average weekday, analyses are performed for 24 one-hour periods of a weekday.
  - Monthly adjustment factors are applied to incorporate monthly fluctuation and are adjusted to account for the number of days in that month to produce monthly VMT
  - Yearly VMT is the aggregation of twelve months and applicable time frames, as detailed in attachment A, based on the emission burden being calculated.

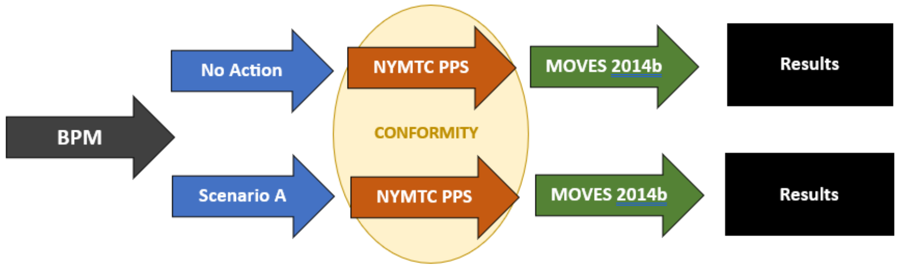
These post-processing adjustments are done to meet the requirements established by the Clean Air Act to ensure that emission budgets are properly estimated.

During the course of preparation of the Final EA, but after the analysis of regional air quality effects was complete, this project was incorporated into NYMTC's conforming TIP and long range plan using Scenario A, which was predicted to result in the least amount of VMT reduction. Since regional conformity was determined prior to the reevaluation, and there has been no significant change in design concept since conformity was determined, the Project is still part of a conforming TIP and long range plan and as such a new regional conformity analysis is not required. Consequently, post processing was not needed as part of the reevaluation. It should be noted that post-processing BPM traffic for the air quality analysis is not needed when the project is included in the conforming TIP and long range plan. NYMTC has confirmed that the adopted toll structure does not represent a significant change in design concept from Tolling Scenario A. Therefore, the Project is still part of a conforming plan and as such a new regional conformity analysis is not required.

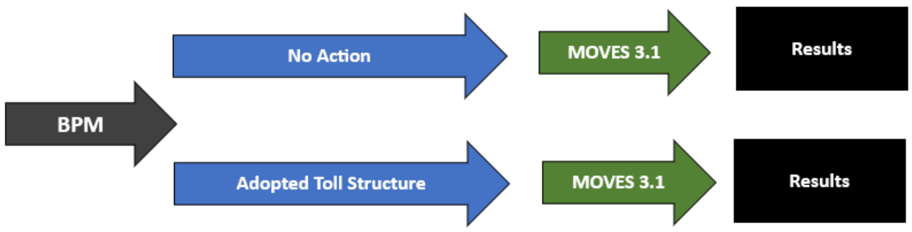
The following diagrams and sections illustrate the process used for air quality analyses for the Final EA and reevaluation. [5]

[5] Supplemental information is provided in Attachment A, and detailed information about the transportation conformity process can be found on FHWA's website: https://www.fhwa.dot.gov/Environment/air_quality/conformity/2017_guide/guide00.cfm.

Air Quality Analysis Process for Final EA with Post-Processing



Air Quality Analysis Process for Reevaluation without Post-Processing



NEPA Analysis: Draft and Final EA (2019-2023)

- The CBDTP NEPA EA included an assessment of the Project's air quality effects on a mesoscale level. The Draft and Final EA documents presented the effects on air quality of Tolling Scenario A, which was the EA tolling scenario that the Project's transportation model predicted would result in the smallest regional reduction in VMT. In this way, the NEPA air quality conclusions were conservative, in that they did not overstate the benefits of the Project on air quality.
- The mesoscale air quality analysis conducted during the NEPA process served two purposes: it determined the Project's potential overall air quality effects for the EA, and it also supported the regional transportation conformity analysis performed by NYMTC, which is the Metropolitan Planning Organization (MPO) for the 10-county region encompassing New York City, Long Island, and the lower Hudson Valley.
- When the analysis of regional air quality commenced in 2019, the Project was not included in NYMTC's conforming transportation plan and transportation improvement program (TIP). Consequently, regional conformity analyses were conducted to allow the Project to be incorporated into the region's long range regional transportation plan and TIP that NYMTC would evaluate for regional transportation conformity.
- The BPM used for the Draft and Final EA was based on the BPM developed for NYMTC's 2018–2045 Regional Transportation Plan and transportation conformity determination adopted on June 27, 2017. For the EA, the roadway networks were updated to include projects that had been implemented or constructed but were not included in the 2017 BPM roadway networks from NYMTC (e.g., two-way tolling on the Verrazzano-Narrows Bridge, reduced lane capacity on the Brooklyn-Queens Expressway near Brooklyn Heights, and bike lane projects like the Brooklyn Bridge bike lane) in the opening (2023) and horizon (2045) years. This is described in the Final EA in Chapter 4, "Transportation," Subchapter 4A,

"Regional Transportation Effects and Modeling" (see pages 4A-1 through 4A-5). The BPM was used to estimate VMT for a No Action Alternative, in which CBDTP does not occur, and for an Action Alternative assuming Tolling Scenario A.

- The mesoscale air quality analyses presented in the Draft and Final EA for Tolling Scenario A were subject to NYMTC's Post-Processing Software (PPS), which results in modifications to the VMT results produced by the BPM. This was done for consistency with the conformity analysis, which was initiated at the same time as the EA analysis. The results were evaluated with the MOVES 2014b emissions estimation model, which was the latest version approved by the U.S. Environmental Protection Agency (EPA)This methodology for the Project was reviewed with the Interagency Consultation Group (ICG), the same group with which NYMTC coordinates when conducting its conformity analysis, consisting of EPA, FHWA, the Federal Transit Administration, the New York State Department of Environmental Conservation, and the New York State Department of Transportation. The ICG confirmed the approach on August 29, 2019.
- The localized air quality analyses used direct outputs from BPM, as is standard procedure for microscale analyses.

NEPA Reevaluation (2024)

- At this time, the Triborough Bridge and Tunnel Authority (TBTA) is preparing a NEPA reevaluation of the Project that considers whether the adopted toll structure will have environmental effects consistent with the effects disclosed in the Final EA and whether the Final EA remains valid.
- CBDTP, using Tolling Scenario A, is now included in the conforming TIP and long range plan, which have been found to conform to the SIP (see NYMTC's Transportation Conformity Determination, adopted September 21, 2023[6]). NYMTC has also confirmed that the adopted toll structure does not represent a significant change in design concept from Tolling Scenario A. Therefore, the Project is still part of a conforming plan and as such a new regional conformity analysis is not required.
- For the reevaluation, the Project team used the same version of the BPM that was used for the Draft and Final EA. The reevaluation used direct output from the BPM related to VMT for the air quality emissions analysis, as there was no need for performing adjustments to the results using NYMTC's Post-Processing Software, as the project is now part of a conforming plan. The BPM results, without post-processing, were modeled using the current EPA emissions model, MOVES3.1. This approach for the reevaluation was confirmed with NYSDOT on October 12, 2023. Direct output from the BPM analysis (i.e., without post processing) estimated a smaller reduction in VMT for Tolling Scenario A than for the adopted toll structure, meaning that the adopted toll structure would result in more emission savings than Tolling Scenario A (which is in the conforming TIP).
- Analyses of mesoscale air quality as well as microscale air quality for the reevaluation relied on direct outputs from the BPM.

[6]https://www.nymtc.org/Portals/0/Pdf/Conformity/Conformity%202023/Adopted%20Documents/2023%20Transportation%20Conformity%20Determination%20Final%20Adopted%2092123.pdf?ver=MOeeqooFnfO3koBgp6sOCg%3d%3d

Findings

The Draft and Final EA analyses reflected the use of post-processed traffic data in the regional air quality analysis to be consistent with the traffic data used in the NYMTC regional conformity analysis. In contrast, the reevaluation used traffic information straight from the BPM, because the Project was included in NYMTC's currently conforming plan and TIP and standard protocol is that post-processing is not required. Furthermore, direct output from the BPM for the adopted toll structure confirmed that VMT reduction for Tolling Scenario A would be smaller than for the adopted toll structure, meaning that the adopted toll structure would result in more emissions savings than Tolling Scenario A.

According to NYMTC, the Post-Processing Software typically increases the VMT by approximately 20 percent (which is conservative for conformity purposes, since higher VMT results in higher levels of air pollutant and these can be compared with the pollutant "budgets" of the SIP to ensure that pollutant budgets are not exceeded). As such, the VMT presented in the Final EA is higher than in the reevaluation. However, since use of the Post-Processing Software was applied to both the No Action and "with Project" scenarios for the Final EA, and was not applied to either for the reevaluation, the incremental changes between No Action and Project can be compared between the two analyses.

Detailed information regarding the BPM, Post-Processing Software, and MOVES, as presented in the 2023 Transportation Conformity Determination, is provided in Attachment A to this document.

Attachment A

BPM

NYMTC uses the New York Best Practice Model (BPM), an activity-based and tour-based travel demand model, to predict and simulate detailed travel patterns for every household in the 28-county study area, over a 24-hour weekday period, based on their travel behavior.

The BPM traffic assignments produce travel demand forecasts on the transportation networks. The roadway/highway assignment outputs must undergo a series of adjustments to calculate the regional VMT and speeds before the emission rates can be applied to generate the required emissions estimates. The adjustments involve the following steps:

- Calculating VMT
- Highway Performance Monitoring System (HPMS) Reconciliation - HPMS is a national program that includes inventory information for all of the nation's public roads as certified by the states' governors annually. HPMS reconciliation factors are applied to the link VMTs to account for the missing local roads and adjustment of higher functional class roadways, to get an accurate estimate of the regional VMT.
- Travel Time Adjustments

➢ **CBDTP EA ANALYSIS: BPM was run for the No Action condition and Tolling Scenario A.**

➢ **CBDTP RE-EVALUATION: BPM was run for the same No Action condition and adopted toll structure.**

Post-Processor Software for Air Quality (PPS-AQ)

NYMTC's PPS-AQ is a powerful web-based application that bridges input data from the BPM and runs it through MOVES to produce an emissions estimate. The PPS-AQ preprocesses BPM output data, invokes MOVES to generate emission rate files, and produces an emission inventory for the regional emissions analysis.

For the EA analysis, the PPS-AQ output from the BPM was used with Project-specific MOVES inputs to generate the emissions. According to NYMTC, the PPS increases VMT from the BPM by approximately 20%.

- DOMAIN/SCALE: Analysis was performed at the county level. The roadways are disaggregated by functional class and, after HPMS reconciliation, aggregated to MOVES road types for the emissions analysis.
- CALCULATION TYPE: Analysis was performed using the "emissions rate" methodology.
- TIME SPAN: Analyses were performed for 24 one-hour periods of a weekday since the BPM data represent an average weekday. The PPS-AQ applies monthly adjustment factors to incorporate monthly fluctuation and then multiplies that adjusted value to the number of days in that month to produce monthly VMT. Yearly VMT is the aggregation of twelve months. All twelve months are selected for the annual emissions forecasts of fine particulate matter ($PM_{2.5}$) and nitrogen oxides (NOx). To reflect the

summer months for analysis of volatile organic compounds (VOC) and NOx, the ozone precursors, an average day of summer months (June, July, August) is selected.

- GEOGRAPHIC BOUNDARY: Custom domains based on the geographic boundary of each nonattainment area in the NYMTC planning area were established in the PPS-AQ.
- COUNTY DATA INPUTS: the most recent county-specific MOVES input databases from NYSDEC and NYSDOT are used.

➢ **CBDTP EA ANALYSIS: No Action and Tolling Scenario A were run through PPS for inclusion in NYMTC's TIP.**

➢ **CBDTP REEVALUATION: No Action and the adopted toll structure were not run through the PPS, as the Project is now in the TIP; direct output from the BPM was used.**

MOVES

USEPA's MOtor Vehicle Emission Simulator (MOVES) is a state-of-the-science emission modeling system that estimates emissions for mobile sources at the national, county, and project level for "criteria" air pollutants (i.e., those specified by the Clean Air Act, as amended), greenhouse gases, and air toxics. MOVES estimates emissions from all the on-road vehicles including cars, trucks, motorcycles, and buses. As noted in the EPA transportation conformity regulation and associated EPA guidance, all regional emissions analyses are required to be based on the latest version of the MOVES software.

There are two options for using MOVES to forecast emissions: 1) inventory mode; and 2) emissions rate mode. The inventory mode calculates total emissions inventory based on vehicle miles of travel and vehicle population data. The emission rate mode produces a look-up table of emission rates including emissions per unit of distance for running emissions, the rate per profile for evaporative processes, and the rate per vehicle for starts and extended idling. As per EPA guidance, NYMTC can use either method to conduct regional emissions analyses. NYMTC, with the concurrence of the ICG, chose to use the emissions rate mode for its emission inventory analysis since emission rates can be applied to multiple scenarios in the same calendar analysis year, thereby reducing the amount of "run-time" for each scenario analysis.

➢ **CBDTP EA ANALYSIS: MOVES2014b (latest version at the time) was used.**

➢ **CBDTP REEVALUATION: MOVES3.1 (latest version, consistent with NYMTC) used.**

A full description of the NYMTC conformity process can be found in the NYMTC 2023 Transportation Conformity Determination.

CENTRAL BUSINESS DISTRICT (CBD) TOLLING PROGRAM

REEVALUATION

April 2024

Federal Lead Agency

U.S. Department of Transportation
Federal Highway Administration

Project

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

MTA

NEW YORK CITY DOT

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DOT_0046399

1 Introduction

In June 2023, the Federal Highway Administration (FHWA) issued a Finding of No Significant Impact (FONSI) for the Central Business District (CBD) Tolling Program. The FONSI was based on the April 2023 Final Environmental Assessment (EA), with committed mitigation.

At that time, seven tolling scenarios were presented in the Final EA and FONSI representing a range of toll structures to evaluate their ability to meet the needs of the Project and the resultant environmental effects. The MTA Reform and Traffic Mobility Act (the Act) requires that a Traffic Mobility Review Board (TMRB) be established to recommend a toll structure to the TBTA Board, in order for the TBTA Board to thereafter propose and adopt a toll structure through a state ratemaking process pursuant to New York's State Administrative Procedure Act (SAPA). Accordingly, the seven tolling scenarios, were developed with different assumptions regarding toll rates, peak periods, and potential discounts, exemptions, and crossing credits, in order to explore and disclose the range of effects that could occur as a result of the CBD Tolling Program. Recognizing that the TMRB could recommend a toll structure that mirrored one of the tolling scenarios, or could recommend different parameters, and that the TBTA Board could choose to adopt a different toll structure, the FONSI contemplated a reevaluation, prepared pursuant to 23 CFR § 771, once the TBTA Board adopted the CBD Tolling Program toll structure.[1]

In November 2023, the TMRB issued a report detailing its tolling recommendations. In accordance with SAPA, the TBTA Board authorized the TMRB's tolling recommendations to be filed in the form of a proposed toll structure, and held a public comment period that included four public hearings. On March 27, 2024, the TBTA Board voted to adopt a final schedule of toll rates as well as associated exemptions, crossing credits, and discounts, referred to in this reevaluation as the "adopted toll structure." The adopted toll structure is the same as recommended by the TMRB with several clarifications incorporated.

The TBTA-adopted toll structure is being reevaluated to determine if the FONSI is still valid. This requires that TBTA demonstrate to FHWA that the effects of the adopted toll structure are consistent with the effects disclosed in the Final EA and that the mitigation is still valid.

The following sections provide the results of analyses conducted for the reevaluation. For ease of comparison, the sections follow the same order for the resource area analyses as the Final EA. Where appropriate, and to provide context, tables with analysis results from the Final EA are provided, side by side with the results of the adopted toll structure.

Based on the analyses conducted for the reevaluation, the Project Sponsors have concluded that the effects of the adopted toll structure are consistent with or less impactful than the effects documented in the Final

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[1] Federal Highway Administration, *Finding of No Significant Impact, Central Business District (CBD) Tolling Program*, https://new.mta.info/document/114186, p. 26.

EA, and that when considered with the mitigation commitments in the Final EA, the Final EA and FONSI remain valid.

Table 1.1 provides a summary of the effects of the adopted toll structure in comparison to the effects presented in the Final EA. The table is a re-creation of the table that was provided in the Final EA as Table ES-5 and Table 16-1, now modified to include the adopted toll structure.

Table 1.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
4A – Transportation: Regional Transportation Effects and Modeling	Vehicle Volumes	▪ Decreases in daily vehicle trips to Manhattan CBD overall. ▪ Some diversions to different crossings to Manhattan CBD or around the Manhattan CBD altogether, depending on tolling scenario. As traffic, including truck trips, increase on some circumferential highways, simultaneously there is a reduction in traffic on other highway segments to the CBD. ▪ Diversions would increase or decrease traffic volumes at local intersections near the Manhattan CBD crossings. ▪ Overall decrease in vehicle-miles traveled (VMT) in the Manhattan CBD and region overall in all tolling scenarios and some shift from vehicle to transit mode.	Crossing locations to Manhattan CBD	% Increase or decrease in daily vehicles entering the Manhattan CBD relative to No Action Alternative	-15%	-16%	-17%	-19%	-20%	-18%	-17%	No	**No mitigation needed.** Beneficial effects	-17%	No	**No mitigation needed.** Same as Final EA
	Auto Journeys to CBD		Manhattan CBD	% Increase or decrease in worker auto journeys to Manhattan CBD relative to No Action Alternative	-5%	-5%	-7%	-9%	-11%	-10%	-6%	No	**No mitigation needed.** Beneficial effects	-6%	No	**No mitigation needed.** Same as Final EA
				Absolute increase or decrease in daily worker auto trips to Manhattan CBD relative to No Action Alternative	-12,571	-12,883	-17,408	-24,017	-27,471	-24,433	-14,578			-16,447		
	Truck Trips Through CBD		Manhattan CBD	Increase or decrease in daily truck trips through Manhattan CBD (without origin or destination in the CBD) relative to No Action Alternative	-4,645 (-55%)	-4,967 (-59%)	-5,253 (-63%)	-5,687 -68%)	-6,604 (-79%)	-6,784 (-81%)	-1,734 (-21%)	No	**No mitigation needed.** Beneficial effects	-4,627 (-55%)	No	**No mitigation needed.** Same as Final EA
	Transit Journeys		Manhattan CBD	% Increase or decrease in daily Manhattan CBD-related transit journeys relative to No Action Alternative	+1.2%	+1.2%	+1.7%	+2.2%	+2.5%	+2.1%	+1.5%	No	**No mitigation needed.** No adverse effects	+1.6%	No	**No mitigation needed.** Same as Final EA
	Traffic Results		Manhattan CBD	% Increase or decrease in daily VMT relative to No Action Alternative	-7.8%	-7.6%	-8.0%	-8.7%	-9.2%	-7.1%	-8.4%	No	**No mitigation needed.** Beneficial effects in Manhattan CBD, New York City (non-CBD), north of New York City, and Connecticut; although there would be VMT increases in Long Island and New Jersey, the effects would not be adverse.	-8.9%	No	**No mitigation needed.** Same as Final EA
			NYC (non-CBD)		-0.3%	-0.2%	-0.7%	-0.9%	-1.0%	-0.7%	-0.3%			-0.4%		
			NY north of NYC		-0.2%	-0.2%	-0.4%	-0.6%	-0.8%	-0.5%	-0.3%			-0.4%		
			Long Island		+0.1%	0.0%	-0.1%	-0.2%	-0.2%	0.0%	0.0%			0.0%		
			New Jersey		+0.0%	+0.0%	+0.2%	+0.2%	+0.1%	+0.2%	+0.1%			+0.1%		
			Connecticut		-0.1%	-0.2%	-0.2%	-0.2%	-0.2%	0.0%	-0.2%			-0.3%		

Table 1.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO (A, B, C, D, E, F, G)	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
4B – Transportation: Highways and Local Intersections	Traffic – Highway Segments	The introduction of the CBD Tolling Program may produce increased congestion on highway segments approaching on circumferential roadways used to avoid Manhattan CBD tolls, resulting in increased delays and queues in midday and PM peak hours on certain segments in some tolling scenarios: ▪ Westbound Long Island Expressway (I-495) near the Queens-Midtown Tunnel (midday) Approaches to westbound George Washington Bridge on I-95 (midday) ▪ Southbound and northbound FDR Drive between East 10th Street and Brooklyn Bridge (PM) ▪ Other locations will see an associated decrease in congestion particularly on routes approaching the Manhattan CBD	10 highway segments (AM)	Highway segments with increased delays and queues in peak hours that would result in adverse effects	0 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D)	Yes	**Mitigation needed.** The Project Sponsors will implement a monitoring plan prior to implementation with post-implementation data collected approximately three months after the start of tolling operations and including thresholds for effects; if the thresholds are reached or crossed, the Project Sponsors will implement Transportation Demand Management (TDM) measures, such as ramp metering, motorist information, signage at all identified highway locations with adverse effects upon implementation of the Project. NYSDOT owns and maintains the relevant segments of the Long Island Expressway and I-95. The relevant segment of the FDR Drive is owned by NYSDOT south of Montgomery Street and NYCDOT north of Montgomery Street. Implementation of TDM measures will be coordinated between the highway owners and the owners of any assets relevant to implementing the TDM. Post-implementation of TDM measures, the Project Sponsors will monitor effects and, if needed, TBTA will modify the toll rates, crossing credits, exemptions, and/or discounts to reduce adverse effects.	AM - 1 out of 10 highway corridors (Westbound Long Island Expressway (I-495) near the Queens-Midtown Tunnel)	Yes	**No additional mitigation needed.** The Project Sponsors will implement the mitigation commitments of the Final EA.
			10 highway segments (midday)		2 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F			Midday - 1 out of 10 highway corridors (approaches to westbound George Washington Bridge on I-95)		
			10 highway segments (PM)		1 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F			PM - 1 out of 10 highway corridors (Southbound and northbound FDR Drive between East 10th Street and Brooklyn Bridge)		
	Intersections	Shifts in traffic patterns, with increases in traffic at some locations and decreases at other locations, would change conditions at some local intersections within and near the Manhattan CBD. Of the 102 intersections analyzed, most intersections would see reductions in delay. Potential adverse effects on four local intersections in Manhattan: ▪ Trinity Place and Edgar Street (midday) ▪ East 36th Street and Second Avenue (midday) ▪ East 37th Street and Third Avenue (midday) ▪ East 125th Street and Second Avenue (AM, PM)	4 locations	Number of locations with potential adverse effects that will be addressed with signal timing adjustments	4 in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F	Yes	Mitigation needed. NYCDOT will monitor those intersections where potential adverse effects were identified and implement appropriate signal timing adjustments to mitigate the effect, per NYCDOT's normal practice. **Enhancement** Refer to the overall enhancement on monitoring at the end of this table.	Potential adverse effects at **1 location:** East 125th Street at Second Avenue (PM)	Yes	**No additional mitigation needed.** The mitigation commitment remains for East 125th Street at Second Avenue; for the other three locations identified in the Final EA, NYCDOT is maintaining the commitment to implement the measures identified in the Final EA as an enhancement.

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Table1.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A B C D E F G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
4B – Transportation: Highways and Local Intersections	Traffic – Highway Segments	The introduction of the CBD Tolling Program may produce increased congestion on highway segments approaching on circumferential roadways used to avoid Manhattan CBD tolls, resulting in increased delays and queues in midday and PM peak hours on certain segments in some tolling scenarios: ▪ Westbound Long Island Expressway (I-495) near the Queens-Midtown Tunnel (midday) Approaches to westbound George Washington Bridge on I-95 (midday) ▪ Southbound and northbound FDR Drive between East 10th Street and Brooklyn Bridge (PM) ▪ Other locations will see an associated decrease in congestion particularly on routes approaching the Manhattan CBD	10 highway segments (AM)	Highway segments with increased delays and queues in peak hours that would result in adverse effects	0 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D)	Yes	**Mitigation needed.** The Project Sponsors will implement a monitoring plan prior to implementation with post-implementation data collected approximately three months after the start of tolling operations and including thresholds for effects; if the thresholds are reached or crossed, the Project Sponsors will implement Transportation Demand Management (TDM) measures, such as ramp metering, motorist information, signage at all identified highway locations with adverse effects upon implementation of the Project. NYSDOT owns and maintains the relevant segments of the Long Island Expressway and I-95. The relevant segment of the FDR Drive is owned by NYSDOT south of Montgomery Street and NYCDOT north of Montgomery Street. Implementation of TDM measures will be coordinated between the highway owners and the owners of any assets relevant to implementing the TDM. Post-implementation of TDM measures, the Project Sponsors will monitor effects and, if needed, TBTA will modify the toll rates, crossing credits, exemptions, and/or discounts to reduce adverse effects.	AM - 1 out of 10 highway corridors (Westbound Long Island Expressway (I-495) near the Queens-Midtown Tunnel)	Yes	**No additional mitigation needed.** The Project Sponsors will implement the mitigation commitments of the Final EA.
			10 highway segments (midday)		2 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F			Midday - 1 out of 10 highway corridors (approaches to westbound George Washington Bridge on I-95)		
			10 highway segments (PM)		1 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F			PM - 1 out of 10 highway corridors (Southbound and northbound FDR Drive between East 10th Street and Brooklyn Bridge)		
	Intersections	Shifts in traffic patterns, with increases in traffic at some locations and decreases at other locations, would change conditions at some local intersections within and near the Manhattan CBD. Of the 102 intersections analyzed, most intersections would see reductions in delay. Potential adverse effects on four local intersections in Manhattan: ▪ Trinity Place and Edgar Street (midday) ▪ East 36th Street and Second Avenue (midday) ▪ East 37th Street and Third Avenue (midday) ▪ East 125th Street and Second Avenue (AM, PM)	4 locations	Number of locations with potential adverse effects that will be addressed with signal timing adjustments	4 in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F	Yes	Mitigation needed. NYCDOT will monitor those intersections where potential adverse effects were identified and implement appropriate signal timing adjustments to mitigate the effect, per NYCDOT's normal practice. **Enhancement** Refer to the overall enhancement on monitoring at the end of this table.	Potential adverse effects at **1 location:** East 125th Street at Second Avenue (PM)	Yes	**No additional mitigation needed.** The mitigation commitment remains for East 125th Street at Second Avenue; for the other three locations identified in the Final EA, NYCDOT is maintaining the commitment to implement the measures identified in the Final EA as an enhancement.

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EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
4C – Transportation: Transit	Transit Systems	The Project would generate a dedicated revenue source for investment in the transit system. Transit ridership would increase by 1 to 2 percent systemwide for travel to and from the Manhattan CBD, because some people would shift to transit rather than driving. Increases in transit ridership would not result in adverse effects on line-haul capacity on any transit routes.	New York City Transit	% Increase or decrease in total AM peak period boardings systemwide	1.5%	1.6%	1.7%	1.9%	2.0%	1.9%	1.8%	No	**No mitigation needed.** No adverse effects	1.7%	No	**No mitigation needed.** No adverse effects
			PATH		0.8%	0.7%	1.4%	1.6%	2.0%	1.8%	1.6%			1.3%		
			Long Island Rail Road		0.6%	0.9%	1.1%	1.5%	2.0%	1.3%	1.0%			1.0%		
			Metro-North Railroad		0.6%	0.8%	1.3%	1.7%	1.4%	1.9%	0.8%			1.4%		
			NJ TRANSIT commuter rail		0.3%	0.5%	1.0%	1.5%	2.3%	1.7%	1.0%			0.9%		
			MTA/NYCT Buses		1.3%	1.3%	1.5%	1.5%	1.6%	1.6%	1.2%			1.3%		
			NJ TRANSIT Bus		0.7%	0.5%	0.6%	0.7%	1.1%	1.0%	0.7%			0.9%		
			Other buses (suburban and private operators)		0.2%	0.0%	0.9%	0.7%	0.5%	0.5%	0.1%			0.2%		
			Ferries (Staten Island Ferry, NYC Ferry, NY Waterway, Seastreak)		2.5%	2.7%	3.1%	3.2%	3.1%	3.6%	2.7%			2.9%		
			Roosevelt Island Tram		1.8%	1.7%	2.0%	2.2%	2.6%	2.5%	1.7%			2.9%		
	Bus System Effects	Decreases in traffic volumes within the Manhattan CBD and near the 60th Street boundary of the Manhattan CBD would reduce the roadway congestion that adversely affects bus operations, facilitating more reliable, faster bus trips.	Manhattan local buses	% Increase or decrease at maximum passenger load point	0.5%	0.5%	0.7%	1.1%	1.2%	0.9%	0.7%	No	**No mitigation needed.** No adverse effects	0.5%	No	**No mitigation needed.** No adverse effects
			Bronx express buses		-1.6%	2.0%	2.2%	-0.5%	2.0%	1.5%	-2.5%			0.6%		
			Queens local and express buses (via Ed Koch Queensboro Bridge)		2.2%	2.0%	2.3%	2.3%	2.5%	2.8%	2.0%			2.2%		
			Queens express buses (via Queens-Midtown Tunnel)		0.3%	0.2%	0.4%	0.8%	1.1%	0.8%	0.6%			0.5%		
			Brooklyn local and express buses		0.8%	1.0%	0.6%	0.7%	0.7%	0.8%	2.6%			0.5%		
			Staten Island express routes (via Brooklyn)		4.0%	4.5%	4.4%	3.8%	3.9%	3.7%	3.5%			3.9%		
			Staten Island express routes (via NJ)		1.0%	1.9%	2.3%	2.8%	1.8%	1.8%	2.4%			1.3%		
			NJ/West of Hudson buses (via Holland Tunnel)		-1.4%	-0.9%	-0.3%	1.4%	-0.9%	-0.6%	-1.4%			1.9%*		
			NJ/West of Hudson buses (via Lincoln Tunnel)		0.4%	0.6%	0.4%	0.6%	1.5%	1.1%	0.6%			0.8%		

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4C – Transportation: Transit (Cont'd)	Transit Elements	Increased ridership would affect passenger flows with the potential for adverse effects at certain vertical circulation elements (i.e., stairs and escalators) in five transit stations: ▪ Hoboken Terminal, Hoboken, NJ PATH station ▪ Times Sq-42 St/42 St-Port Authority Bus Terminal subway station in the Manhattan CBD (N, Q, R, W, and S; Nos. 1, 2, 3, and 7; and A, C, E lines) ▪ Flushing-Main St subway station, Queens (No. 7 line) ▪ 14th Street-Union Square subway station in the Manhattan CBD (Nos. 4, 5, and 6; and L, N, Q, R, W lines) ▪ Court Square subway station, Queens (No. 7 and E, G, M lines)	Hoboken Terminal–PATH station (NJ) Stair 01/02	Net passenger increases or at stair in the peak hour	45	72	122	164	240	205	139	Yes	**Mitigation needed for Tolling Scenarios E and F.** TBTA will coordinate with NJ TRANSIT and PANYNJ to monitor pedestrian volumes on Stair 01/02 one month prior to commencing tolling operations to establish a baseline, and two months after Project operations begin. If a comparison of Stair 01/02 passenger volumes before and after implementation shows an incremental change that is greater than or equal to 205, then TBTA will coordinate with NJ TRANSIT and PANYNJ to implement improved signage and wayfinding to divert some people from Stair 01/02, and supplemental personnel if needed.	140	No	**No mitigation needed.** TBTA is maintaining its commitment to implement the mitigation measures identified in the Final EA as an enhancement
			42 St-Times Square–subway station (Manhattan) Stair ML6/ML8 connecting mezzanine to uptown 1/2/3 lines subway platform	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	63%	59%	68%	82%	100%	82%	56%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, TBTA will coordinate with MTA NYCT to remove the center handrail and standardize the riser, so that the stair meets code without the hand rail. The threshold will be set to allow for sufficient time to implement the mitigation so that the adverse effect does not occur.	60%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA
			Flushing-Main St subway station (Queens)–Escalator E456 connecting street to mezzanine level	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	116%	91%	108%	116%	100%	133%	72%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, MTA NYCT will increase the speed from 100 feet per minute (fpm) to 120 fpm.	110%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA.
			Union Sq subway station (Manhattan)–Escalator E219 connecting the L subway line platform to the Nos. 4/5/6 line mezzanine	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	63%	82%	87%	102%	100%	95%	61%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, MTA NYCT will increase the escalator speed from 100 fpm to 120 fpm.	77%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA.
			Court Sq subway station (Queens)–Stair P2/P4 to Manhattan-bound No. 7 line	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	98%	90%	102%	104%	100%	117%	97%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, TBTA will coordinate with MTA NYCT to construct a new stair from the northern end of the No. 7 platform to the street. The threshold will be set to allow for sufficient time to implement the mitigation so that the adverse effect does not occur.	102%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA

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4D – Transportation: Parking	Parking Conditions	All tolling scenarios would result in a reduction in parking demand within the Manhattan CBD of a similar magnitude to the reduction in auto trips into the Manhattan CBD. With a shift from driving to transit, there would be increased parking demand at subway and commuter rail stations and park-and-ride facilities outside the Manhattan CBD.	Manhattan CBD	Narrative	Reduction in parking demand due to reduction in auto trips to CBD	No	**No mitigation needed.** Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects
			Transit Facilities	Narrative	Small changes in parking demand at transit facilities, corresponding to increased commuter rail and subway ridership	No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects

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4E – Transportation: Pedestrians and Bicycles	Pedestrian Circulation	Increased pedestrian activity on sidewalks outside transit hubs because of increased transit use. At all but one location in the Manhattan CBD (Herald Square/Penn Station), the increase in transit riders would not generate enough new pedestrians to adversely affect pedestrian circulation in the station area. Outside the Manhattan CBD, transit usage at individual stations would not increase enough to adversely affect pedestrian conditions on nearby sidewalks, crosswalks, or corners.	Herald Square/Penn Station NY	Sidewalks, corners, and crosswalks with pedestrian volumes above threshold in AM / PM peak periods	Adverse effects on pedestrian circulation at one sidewalk segment and two crosswalks	Yes	**Mitigation needed.** The Project Sponsors will implement a monitoring plan at this location. The plan will include a baseline, specific timing, and a threshold for additional action. If that threshold is reached, NYCDOT will increase pedestrian space on sidewalks and crosswalks via physical widening and/or removing or relocating obstructions.	Pedestrian volumes at key transit stations/hubs would be similar to and those predicted in Final EA. Adverse effects are no longer predicted at Herald Square.	No	**Mitigation is no longer needed.** The Project Sponsors will implement the mitigation commitment described in the Fina EA as an enhancement
	Bicycles	Small increases in bicycle trips near transit hubs and as a travel mode	Manhattan CBD	Narrative	Small increases in bicycle trips near transit hubs with highest increases in pedestrian trip share	No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects
			Outside Manhattan CBD	Narrative	Some shifts from automobile to bicycles	No	**No mitigation needed**. No adverse effects		No	**No mitigation needed**. No adverse effects
	Safety	No adverse effects	Overall	Narrative	No substantial increases in pedestrian volumes or increased safety concerns, including at existing identified high-crash locations. Overall, with fewer vehicular trips entering and exiting the Manhattan CBD, the CBD Tolling Alternative could result in reduced traffic volumes at these locations. This would help to reduce vehicle-vehicle and vehicle-pedestrian conflicts, leading to an overall benefit to safety.	No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects

Table 1.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

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5A – Social Conditions: Population	Benefits	Benefits in and near the Manhattan CBD	28-county study area	Narrative	Benefits in and near the Manhattan CBD related to travel-time savings, improved travel-time reliability, reduced vehicle operating costs, improved safety, reduced air pollutant emissions, and predictable funding source for transit improvements. This would positively affect community connections and access to employment, education, healthcare, and recreation for residents.	No	**No mitigation needed.** Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects
	Community Cohesion	Changes to travel patterns, including increased use of transit, resulting from new toll	28-county study area	Narrative	Changes to travel patterns, including increased use of transit, as a result of the Project would not adversely affect community cohesion or make it more difficult for people to connect with others in their community, given the extensive transit network connecting to the Manhattan CBD and the small change in trips predicted.	No	**No mitigation needed.** No adverse effects (see "Environmental Justice" for mitigation related to increased costs for low-income drivers).	Same as Final EA	No	**No mitigation needed.** Beneficial effects
	Indirect Displacement	No notable changes in socioeconomic conditions or cost of living so as to induce potential involuntary displacement of residents	Manhattan CBD	Narrative	The Project would not result in the potential for indirect (involuntary) residential displacement. It would not result in substantial changes to market conditions so as to lead to changes in housing prices, given that real estate values in the Manhattan CBD are already high and the many factors that affect each household's decisions about where to live. In addition, low-income residents of the CBD would not experience a notable increase in the cost of living as a result of the Project because of the lack of change in housing costs, the many housing units protected through New York's rent-control, rent-stabilization, and other similar programs, the tax credit available to CBD residents with incomes of up to $60,000, and the conclusion that the cost of goods would not increase as a result of the Project (see "Economic Conditions").	No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
	Community Facilities and Services	Increased cost for community facilities and service providers in the Manhattan CBD, their employees who drive, and clientele who drive from outside the CBD	Manhattan CBD	Narrative	The Project would increase costs for community service providers that operate vehicles into and out of the Manhattan CBD and for people who travel by vehicle to community facilities and services in the Manhattan CBD, as well as residents of the CBD and employees of community facilities who use vehicles to travel to community facilities outside the CBD. Given the wide range of travel options other than driving, the cost for users to drive to community facilities and services would not constitute an adverse effect on community facilities and services.	No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
	Effects on Vulnerable Social Groups	Benefits to vulnerable social groups from new funding for MTA Capital Program	28-county study area	Narrative	The Project would benefit certain vulnerable social groups, including elderly populations, persons with disabilities, transit-dependent populations, and non-driver populations by creating a funding source for the MTA 2020–2024 Capital Program (and subsequent capital programs and by reducing congestion in the Manhattan CBD). Elderly individuals would benefit from the travel-time and reliability improvements to bus service with the CBD Tolling Alternative, as bus passengers tend to be older than riders on other forms of transit, such as the subway and, as described above, bus passengers in the Manhattan CBD would benefit from travel-time savings due to the decrease in congestion. People over the age of 65 with a qualifying disability receive a reduced fare on MTA subways and buses, and elderly individuals with a qualifying disability can also receive MTA's paratransit service, including taxis and FHVs operating on behalf of MTA to transport paratransit users. Elderly people with disabilities and low-income individuals who drive to the Manhattan CBD would be entitled to the same mitigation and enhancements proposed for low-income and disabled populations, in general. Other elderly individuals who drive to the Manhattan CBD would pay the toll.	No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
	Access to Employment	Increased cost for small number of people who drive to work	28-county study area	Narrative	Decrease in work trips by driving modes to and within the Manhattan CBD, with an offsetting increase in transit ridership. Those who drive despite the CBD toll would do so based on the need or convenience of driving and would benefit from the reduced congestion in the Manhattan CBD. Negligible effect (less than 0.1%) on travel to employment within the Manhattan CBD and reverse-commuting from the CBD due to the wide range of transit options available and the small number of commuters who drive today.	No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects

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5B – Social Conditions: Neighborhood Character	Neighborhood character	No notable change in neighborhood character	Manhattan CBD	Narrative	The changes in traffic patterns on local streets would not change the defining elements of the neighborhood character of the Manhattan CBD.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
			Area near 60th Street Manhattan CBD boundary	Narrative	Changes in parking demand near the 60th Street CBD boundary (including increases just north of 60th Street and decreases just to the south) would not create a climate of disinvestment that could lead to adverse effects on neighborhood character nor alter the defining elements of the neighborhood character of this area.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
5C – Social Conditions: Public Policy	Public policy	No effect	28-county study area	Narrative	The Project would be consistent with regional transportation plans and other public policies in place for the regional study area and the Manhattan CBD.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects

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6 – Economic Conditions	Benefits	Regional economic benefits	28-county study area	Narrative	Economic benefit through congestion relief in terms of travel-time savings and travel-time reliability improvements, which would increase productivity and utility, as well as safety improvements and reduced vehicle operating costs associated with reductions in congestion.							No	**No mitigation needed**. Beneficial effects	Same as Final EA	No	**No mitigation needed**. Beneficial effects
	Economic Effects of Toll Costs	Cost of new toll for workers and businesses in the CBD that rely on vehicles	Manhattan CBD	Narrative	No adverse effects to any particular industry or occupational category in the Manhattan CBD. Given the high level of transit access in the CBD and high percentage of transit share, the toll would affect only a small percentage of the overall workforce. This would not adversely affect operations of businesses in the Manhattan CBD or the viability of any business types, including the taxi/FHV industry.							No	**No mitigation needed.** No adverse effects **Enhancements** The Project Sponsors commit to establishing a Small Business Working Group (SBWG) that will meet 6 months prior and 6 months after Project implementation, and annually thereafter, to solicit ongoing input on whether and how businesses are being affected. As part of mitigation for other topics, TBTA will ensure the overnight toll for trucks and other vehicles is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m. in the final CBD toll structure; this will also benefit some workers and businesses.	Same as Final EA	No	**No mitigation needed.** No adverse effects The Project Sponsors will implement the Enhancements described in the Final EA.
	Price of Goods	Cost of new toll would not result in changes in the cost of most consumer goods	Manhattan CBD	Narrative	Not anticipated to result in meaningful change in cost for most consumer goods. Any cost increase associated with the new toll in the CBD Tolling Alternative that would be passed along to receiving businesses would be distributed among several customers per toll charge (since trucks make multiple deliveries) especially for businesses, including small businesses and micro-businesses, receiving smaller deliveries. This would minimize the cost to any individual business. Some commodity sectors (construction materials, electronics, beverages) are more prone to increases due to less competition within delivery market.							No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
	Taxi and FHV Industry	Depending on the tolling scenario, the toll could reduce taxi and FHV revenues due to a reduction in taxi/FHV VMT with passengers within the CBD. While this could adversely affect individual drivers (see "Environmental Justice"), the industry would remain viable overall.	28-county study area	Net change in daily taxi/FHV VMT regionwide	-126,993 (-2.9%)	-14,028 (-0.3%)	-73,413 (-1.7%)	-217,477 (-5.0%)	-116,065 (-2.7%)	-4,888 (-1.0%)	-137,815 (-3.2%)	No	**No mitigation needed.** No adverse effects (see "Environmental Justice" for mitigation related to effects on taxi and FHV drivers).	-30,963 (-0.7%)	No	**No mitigation needed.** No adverse effects
				Net change in daily taxi/FHV VMT in the CBD	-21,498 (-6.6%)	+15,020 (+4.6%)	-11,371 (-3.5%)	-54,476 (-16.8%)	-25,621 (-7.9%)	+4,962 (+1.5%)	-27,757 (-8.6%)			-904 (-0.3%)		
	Local Economic Effects	Changes in parking demand near the 60th Street CBD boundary	Area near 60th Street Manhattan CBD boundary	Narrative	Changes in parking demand near the 60th Street Manhattan CBD boundary (including increases just north of 60th Street and decreases just to the south) could jeopardize the viability of one or more parking facilities in the area south of 60th Street but would not create a climate of disinvestment that could lead to adverse effects on neighborhood character.							No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects

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7 – Parks and Recreational Resources		New tolling infrastructure, tolling system equipment, and signage in the southern portion of Central Park	Manhattan CBD	Narrative	The Project would replace four existing streetlight poles at three detection locations in Central Park near 59th Street and on two adjacent sidewalks outside the park's wall. These poles would be in the same locations as existing poles and would not reduce the amount of park space or affect the features and activities of the park. The Project would also place tolling infrastructure beneath the structure of the High Line, outside the park area atop the High Line structure. Following consideration of public input received during the public comment period, FHWA concluded the CBD Tolling Alternative would not affect the activities, features, and attributes that qualify the High Line for protection under Section 4(f), and the CBD Tolling Alternative would have a *de minimis* impact on Central Park.							No	**No mitigation needed.** Refer to **Chapter 7, "Parks and Recreational Resources,"** for a listing of measures to avoid adverse effects to parks.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	**No mitigation needed.** The Project Sponsors will implement measures described in the Final EA.
8 – Historic and Cultural Resources		New tolling infrastructure and tolling system equipment on or near historic properties	45 historic properties within the Project's Area of Potential Effects (APE)	Narrative	Based on a review of the Project in accordance with Section 106 of the National Historic Preservation Act, FHWA has determined that the Project would have No Adverse Effect on historic properties and the State Historic Preservation Office has concurred.							No	**No mitigation needed.** Refer to **Chapter 8, "Historic and Cultural Resources,"** for a listing of measures to avoid adverse effects to historic properties.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	**No mitigation needed.** The Project Sponsors will implement the measures described in the Final EA.
9 – Visual Resources		Changes in visual environment resulting from new tolling infrastructure and tolling system equipment	Area of visual effect	Narrative	Infrastructure and equipment would be similar in form to streetlight poles, sign poles, or similar structures already in use throughout New York City. Cameras included in the array of tolling system equipment would use infrared illumination at night to allow images of license plates to be collected without any need for visible light. The Project would have a neutral effect on viewer groups and no adverse effect on visual resources							No	**No mitigation needed.** No adverse effects	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	**No mitigation needed.** No adverse effects.

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				A	B	C	D	E	F	G					
10 – Air Quality	Increases or decreases in emissions related to truck traffic diversions	Cross Bronx Expressway at Macombs Road, Bronx, NY	Increase or decrease in Annual Average Daily Traffic (AADT)	3,901	3,996	2,056	1,766	3,757	2,188	3,255	No	**No mitigation needed.** No adverse effects **Enhancements** **1.** Refer to the overall enhancement on monitoring at the end of this table. **2.** TBTA will work with NYC DOHMH to expand the existing network of sensors to monitor priority locations and supplement a smaller number of real-time $PM_{2.5}$ monitors to provide insight into time-of-day patterns to determine whether the changes in air pollution can be attributed to changes in traffic occurring after implementation of the Project. The Project Sponsors will select the additional monitoring locations in consideration of air quality analysis in the EA and input from environmental justice stakeholders. NYS Department of Environmental Conservation (NYSDEC) and other agencies conducting monitoring will also be consulted prior to finalizing the monitoring approach. The Project Sponsors will monitor air quality prior to implementation (setting a baseline), and two years following implementation. Following the initial two-year post-implementation analysis period, and separate from ongoing air quality monitoring and reporting, the Project Sponsors will assess the magnitude and variability of changes in air quality to determine whether more monitoring sites are necessary. Data collected throughout the monitoring program will be made available publicly as data becomes available and analysis is completed. Data from the real-time monitors will be available online continuously from the start of pre-implementation monitoring. **3.** MTA is currently transitioning its fleet to zero-emission buses, which will reduce air pollutants and improve air quality near bus depots and along bus routes. MTA is committed to prioritizing traditionally underserved communities and those impacted by poor air quality and climate change and has developed an approach that actively incorporates these priorities in the deployment phasing process of the transition. Based on feedback received during the outreach conducted for the Project and concerns raised by members of environmental justice communities, TBTA coordinated with MTA NYCT, which is committed to prioritizing the Kingsbridge Depot and Gun Hill Depot, both located in and serving primarily environmental justice communities in Upper Manhattan and the Bronx, when electric buses are received in MTA's next major procurement of battery electric buses, which began in late 2022. This independent effort by MTA NYCT is anticipated to provide air quality benefits to the environmental justice communities in the Bronx.	3,917	No	**No mitigation needed.** The Project Sponsors are maintaining their commitment to implement the enhancement measures identified in the Final EA and FONSI.
			Increase or decrease in daily number of trucks	509	704	170	510	378	536	50			433		
			Potential adverse air quality effects from truck diversions	No	No	No	No	No	No	No			No		
		I-95, Bergen County, NJ	Increase or decrease in AADT	9,843	11,459	7,980	5,003	7,078	5,842	12,506	No		10,341	No	
			Increase or decrease in daily number of trucks	801	955	729	631	696	637	-236			499		
			Potential adverse air quality effects from truck diversions	No	No	No	No	No	No	No			No		
		RFK Bridge, NY	Increase or decrease in AADT	18,742	19,440	19,860	19,932	20,465	20,391	21,006	No		20,273	No	
			Increase or decrease in daily number of trucks	2,257	2,423	2,820	3,479	4,116	3,045	432			2,433		
			Potential adverse air quality effects from truck diversions	No	No	No	No	No	No	No			No		

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11 – Energy		Reductions in regional energy consumption	12-county study area	Narrative	Reductions in regional VMT would reduce energy consumption							No	**No mitigation needed.** Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects
EA CHAPTER	**TOPIC**	**SUMMARY OF EFFECTS**	**LOCATION**	**DATA SHOWN IN TABLE**	**FINAL EA TOLLING SCENARIO**							**POTENTIAL ADVERSE EFFECT**	**MITIGATION AND ENHANCEMENTS**	**ADOPTED TOLL STRUCTURE**	**POTENTIAL ADVERSE EFFECT**	**MITIGATION AND ENHANCEMENTS**
					A	**B**	**C**	**D**	**E**	**F**	**G**					
12 – Noise		Imperceptible increases or decreases in noise levels resulting from changes in traffic volumes	Bridge and tunnel crossings	Narrative	The maximum noise level increases (2.9 dB(A)), which were predicted adjacent to the Queens-Midtown Tunnel in Tolling Scenario D, would not be perceptible.							No	**No mitigation needed**. No adverse effects **Enhancement** Refer to the overall enhancement on monitoring at the end of this table.	The maximum predicted noise level increase (0.5 dB(A)) at RFK Bridge in Manhattan, would not be perceptible.	No	**No mitigation needed**. No adverse effects. The Project Sponsors are maintaining their commitment to implement the enhancement measures identified in the Final EA and FONSI.
			Local streets	Narrative	Tolling Scenario C was used to assess noise level changes in Downtown Brooklyn, Tolling Scenario D was used at all other locations assessed. The maximum predicted noise level increases (2.5 dB(A)), which were at Trinity Place and Edgar Street, would not be perceptible. There was no predicted increase in noise levels in the Downtown Brooklyn locations.							No		The maximum predicted noise level increases (2.8 dB(A)), at W. 179th St / Broadway, would not be perceptible.	No	

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13 – Natural Resources		Construction activities to install tolling infrastructure near natural resources	Sites of tolling infrastructure and tolling system equipment	Narrative	No effects on surface waters, wetlands, or floodplains. Potential effects on stormwater and ecological resources will be managed through construction commitments. The Project is consistent with coastal zone policies.							No	Refer to **Chapter 13, "Natural Resources,"** for a listing of construction commitments to avoid, minimize, or mitigate potential negative effects.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	The Project Sponsors will implement the construction commitments described in the Final EA.
14 – Hazardous Waste		Potential for disturbance of existing contaminated or hazardous materials during construction	Sites of tolling infrastructure and tolling system equipment	Narrative	Soil disturbance during construction and the potential alteration, removal, or disturbance of existing roadway infrastructure and utilities that could contain asbestos-containing materials, lead-based paint, or other hazardous substances. Potential effects will be managed through construction commitments.							No	Refer to **Chapter 14, "Asbestos-Containing Materials, Lead-Based Paint, Hazardous Wastes, and Contaminated Materials,"** for a listing of construction commitments to avoid, minimize, or mitigate potential negative effects.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	The Project Sponsors will implement the construction commitments described in the Final EA.
15 – Construction Effects		Potential disruption related to construction for installation of tolling infrastructure	Sites of tolling infrastructure and tolling system equipment	Narrative	Temporary disruptions to traffic and pedestrian patterns, and noise from construction activities, with a duration of less than one year overall, and approximately two weeks at any given location. These effects will be managed through construction commitments.							No	Refer to **Chapter 15, "Construction Effects,"** for a listing of construction commitments to avoid, minimize, or mitigate potential negative effects.	Same as Final EA. No change proposed to construction for new tolling infrastructure, tolling system equipment, or signage.	No	The Project Sponsors will implement the construction commitments described in the Final EA.

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17 – Environmental Justice	Low-income drivers	The EA as published in August 2022 found the increased cost to drivers with the new CBD toll would disproportionately affect low-income drivers to the Manhattan CBD who do not have a reasonable alternative for reaching the Manhattan CBD. With further analysis of the population affected and the addition of new mitigation, the Final EA concludes there would not be a disproportionately high and adverse effect on low-income drivers.	28-county study area	Narrative	The increased cost to drivers would occur under all tolling scenarios.							Yes	**Mitigation needed.** The Project will include a tax credit for CBD tolls paid by residents of the Manhattan CBD whose New York adjusted gross income for the taxable year is less than $60,000. TBTA will coordinate with the New York State Department of Taxation and Finance (NYS DTF) to ensure availability of documentation needed for drivers eligible for the NYS tax credit. TBTA will post information related to the tax credit on the Project website, with a link to the appropriate location on the NYS DTF website to guide eligible drivers to information on claiming the credit. TBTA will eliminate the $10 refundable deposit currently required for E-ZPass customers who do not have a credit card linked to their account, and which is sometimes a barrier to access. TBTA will provide enhanced promotion of existing E-ZPass payment and plan options, including the ability for drivers to pay per trip (rather than a pre-loaded balance), refill their accounts with cash at participating retail locations, and discount plans already in place, about which they may not be aware. TBTA will coordinate with MTA to provide outreach and education on eligibility for existing discounted transit fare products and programs, including those for individuals 65 years of age and older, those with disabilities, and those with low incomes, about which many may not be aware. The Project Sponsors commit to establishing an Environmental Justice Community Group that will meet on a quarterly basis, with the first meeting taking place prior to Project implementation, to share updated data and analysis and hear about potential concerns. As it relates to environmental justice, the Project Sponsors will continue providing meaningful opportunities for participation and engagement by sharing updated data and analysis, listening to concerns, and seeking feedback on the toll setting process. TBTA will ensure the overnight toll for trucks and other vehicles is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m. in the final CBD toll structure; this will benefit low-income drivers who travel during that time. For five years, TBTA commits to a Low-Income Discount Plan for low-income frequent drivers who will benefit from a 25 percent discount on the full CBD E-ZPass toll rate for the applicable time of day after the first 10 trips in each calendar month (not including the overnight period, which will already be deeply discounted). **Enhancement** TBTA will coordinate with MTA NYCT to improve bus service in areas identified in the EA as the Brooklyn and Manhattan Bus Network Redesigns move forward.	Incorporating the identified mitigation, no disproportionately high and adverse effect would occur on low-income drivers.	No (with identified mitigation)	No change in identified mitigation needed. The adopted toll structure incorporates and expands the mitigation commitments of the Final EA and FONSI. The adopted toll structure includes an overnight toll for trucks and other vehicles at 25 percent of the peak toll from 9 p.m. to 5 a.m. on weekdays and 9 p.m. to 9 a.m. on weekends The adopted toll structure commits, for five years to a Low-Income Discount Plan for low-income frequent drivers who will benefit from a 50 percent discount on the full CBD E-ZPass toll rate for the applicable time of day after the first 10 trips in each calendar month (not including the overnight period, which will already be deeply discounted).

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					A	B	C	D	E	F	G					
17 – Environmental Justice	Taxi and FHV drivers	The EA as published in August 2022 found a potential disproportionately high and adverse effect would occur to taxi and FHV drivers in New York City, who largely identify as minority populations, in tolling scenarios that toll their vehicles more than once a day. This would occur in unmodified Tolling Scenarios A, D, and G; for FHV drivers, it would also occur in Tolling Scenarios C and E. The adverse effect would be related to the cost of the new CBD toll and the reduction of VMT for taxis and FHVs, which would result in a decrease in revenues that could lead to losses in employment. With the addition of new mitigation, the Final EA concludes there would not be a disproportionately high and adverse effect on taxi and FHV drivers.	New York City	Narrative	Potential adverse effect would occur in Tolling Scenarios A, D, and G, which would not have caps or exemptions for taxis and FHV drivers.							Yes	**Mitigation needed.** TBTA will ensure that a toll structure with tolls of no more than once per day for taxis or FHVs is included in the final CBD toll structure.	No disproportionately high and adverse effect would occur on New York City taxi and FHV drivers with the adopted toll structure, which includes a per-trip toll on trips to, within, or from the CBD of $1.25 for taxis and $2.50 for FHVs. These per-trip tolls are equivalent to the once per day toll for passenger vehicles included as part of the adopted toll structure.	No	**No mitigation needed.**
				Change in daily taxi/FHV VMT with passengers in the CBD relative to No Action Alternative: Scenarios included in EA	-21,498 (-6.6%)	+15,020 (+4.6%)	-11,371 (-3.5%)	-54,476 (-16.8%)	-25,621 (-7.9%)	+4,962 (+1.5%)	-27,757 (-8.6%)			-904 (-0.3%)		
				Net change in daily taxi/FHV trips to CBD relative to scenarios included in EA: Additional analysis to assess effects of caps or exemptions	Tolls capped at 1x / Day: +2%	—	—	Tolls capped at 1x / Day: +3% Exempt: +50%	—	—	Tolls capped at 1x / Day: +2%			NA		

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Table 1.1. Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
17 – Environmental Justice (Cont'd)	Increases or decreases in traffic, as a result of traffic diversions, in communities already overburdened by pre-existing air pollution and chronic diseases	Certain environmental justice communities would benefit from decreased traffic; some communities that are already overburdened by pre-existing air pollution and chronic diseases could see an adverse effect as a result of increased traffic.	The specific census tracts that would experience increased or decreased traffic change slightly depending on the tolling scenario. The following communities could have census tracts that merit place-based mitigation: High Bridge–Morrisania, Crotona–Tremont, Hunts Point–Mott Haven, Pelham–Throgs Neck, Northeast Bronx, East Harlem, Randall's Island, Lower East Side/Lower Manhattan, Downtown Brooklyn–Fort Greene, South Williamsburg, Orange, East Orange, Newark, and Fort Lee.	Narrative	Census tracts with pre-existing air pollutant and chronic disease burdens that would benefit from reduced traffic, and those affected by increased traffic would vary somewhat, but the identified communities remain largely the same across tolling scenarios. Under Tolling Scenario G, Fort Lee would not experience increases.							Yes	**Mitigation needed.** **<u>Regional Mitigation</u>** TBTA will ensure the overnight toll for trucks and other vehicles is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m. in the final toll structure; this will reduce truck diversions. NYCDOT will expand the NYC Clean Trucks Program to accelerate the replacement of eligible diesel trucks, which travel on highways in certain environmental justice communities where the Project is projected to increase truck traffic, to lower-emission electric, hybrid, compressed natural gas, and clean diesel vehicles. NYCDOT will expand its off-hours delivery program in locations where the Project is projected to increase truck diversions to reduce daytime truck traffic and increase roadway safety in certain environmental justice communities. **<u>Place-based Mitigation</u>** TBTA will toll vehicles traveling northbound on the FDR Drive that exit at East Houston Street and then turn to immediately travel south on FDR Drive; this will mitigate modeled non-truck traffic increases on the FDR Drive between the Brooklyn Bridge and East Houston Street. NYCDOT will coordinate to replace diesel-burning TRUs at Hunts Point with cleaner vehicles. NYSDOT will coordinate to expand electric truck charging infrastructure. The Project Sponsors will coordinate to install roadside vegetation to improve near-road air quality. The Project Sponsors will renovate parks and greenspaces. The Project Sponsors will install or upgrade air filtration units in schools. The Project Sponsors will coordinate to expand existing asthma case management programs and create new community-based asthma programming through a neighborhood asthma center in the Bronx.	Census tracts with pre-existing air pollutant and chronic disease burdens that would benefit from reduced traffic, and those affected by increased traffic vary somewhat from the Final EA, as anticipated. The communities that merit place-based mitigation remain the same as those identified in the Final EA and allocations of place-based mitigation funds have been made for each as follows: Crotona–Tremont, \$22.6m; High Bridge–Morrisania, \$9.2m; Hunts Point–Mott Haven, \$18.9m; Northeast Bronx, \$4.4m; Pelham–Throgs Neck, \$16.6m; Downtown–Heights–Slope (Downtown Brooklyn–Fort Greene), \$5.7m; Greenpoint (South Williamsburg), \$7.4m; East Harlem, \$4.4m; Randall's Island, \$0.9m; Fort Lee, \$1.4m; City of Orange, \$0.9m; East Orange, \$1.8m; and Newark, \$5.7M. (See Note 1.). TBTA's place-based mitigation for Union Square - Lower East Side (Lower East Side) has no associated cost.	Yes	**No additional mitigation needed.** The Project Sponsors will mplement the mitigation commitments of the Final EA and FONSI listed under Mitigation and Enhancements" in this table).

Note:

1 Based on analysis of the adopted toll structure, communities and census tracts where place-based mitigation measures will be implemented have been confirmed – the specific siting of mitigation measures is being determined through analysis of data on needs and feasibility and coordination among the Project Sponsors, the Environmental Justice Community Group (representing the 10-county environmental justice study area), and relevant stakeholders and implementing agencies; see "Benefits and Allocation of Funding for Mitigation Measures," above.

OVERALL PROJECT ENHANCEMENT. The Project Sponsors commit to ongoing monitoring and reporting of potential effects of the Project, including for example, traffic entering the CBD, vehicle-miles traveled in the CBD; transit ridership from providers across the region; bus speeds within the CBD; air quality and emissions trends; parking; and Project revenue. Data will be collected in advance and after implementation of the Project. A formal report on the effects of the Project will be issued one year after implementation and then every two years. In addition, a reporting website will make data, analysis, and visualizations available in open data format to the greatest extent practicable. Updates will be provided on at least a bi-annual basis as data becomes available and analysis is completed. This data will also be used to support an adaptive management approach to monitoring the efficacy of mitigation, and adjustments as warranted.

2 Project Description: Adopted Toll Structure

The toll structure as adopted by the TBTA Board on March 27, 2024 and published in the New York State Register on [DATE TO COME; WEBLINK TO COME], is included in **Figure 2.1** below.

The parameters of the adopted toll structure fall within the range of tolling scenarios evaluated in the Final EA, as illustrated in **Table 2.1** below, which is the re-creation of Final EA Table 2-3, "Tolling Scenarios Evaluated for the CBD Tolling Alternative" (from page 2-31 of the Final EA) with the adopted toll structure added. As shown in the table, the adopted toll structure has a simplified two-time-period structure (i.e., peak and overnight) on weekdays, as opposed to the three-time-period (i.e., peak, off-peak, and overnight) weekday structures studied in the Final EA. As there is no longer an off-peak period on weekdays, the weekday peak and overnight periods are longer than those studied in the Final EA and FONSI. The peak toll rates in the adopted toll structure are within the range of those presented in the Final EA and the overnight rates are lower than both the off-peak and overnight rates presented in the Final EA. Other parameters related to potential exemptions and caps on the number of tolls per day for certain vehicles also fall within the range presented in the Final EA and FONSI.

The adopted toll structure would use the same tolling infrastructure and tolling system equipment described and evaluated in the Final EA. Construction for the Project began in July 2023 and the construction of tolling infrastructure and tolling system equipment is now complete. Power and communications are nearing completion and testing is under way.

The adopted toll structure continues to meet the Project purpose, needs, and objectives. See **Table 2.2**, which is a re-creation of Final EA Table ES-3, "Comparison of Evaluation Results for the No Action and CBD Tolling Alternatives" (from page ES-14 of the Final EA) with the adopted toll structure added.

Figure 2.1 Adopted Toll Structure

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY CENTRAL BUSINESS DISTRICT (CBD) CHARGES			
a	E-ZPass Customers VEHICLE CLASSIFICATION	CBD ENTRY CHARGE	TUNNEL CROSSING CREDIT
1	Passenger and other vehicles, including sedans, sport utility vehicles, station wagons, hearses, limousines, pickup trucks with factory beds, pickup trucks with caps below the roofline and not extending over the sides, and vans without an extended roof above the windshield		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$15.00	
	Peak period for registered Low-Income Discount Plan participants using an eligible vehicle, 11th trip and trips thereafter in a calendar month (5am-9pm weekdays, 9am-9pm weekends)	$7.50	
	Peak period per-trip credit (maximum daily credit $5.00)		
	If entering the CBD via the Lincoln Tunnel or Holland Tunnel		$5.00
	If entering or exiting the CBD via the Queens-Midtown Tunnel or Hugh L. Carey Tunnel		$2.50
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$3.75	
2	Single-unit trucks, including non-articulated trucks, pickup trucks with modified beds, vans with modified body behind the drivers cab, pickup trucks with caps above the roofline or extending over the sides, and vans with an extended roof above the windshield		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$24.00	
	Peak period per-trip credit		
	If entering the CBD via the Lincoln Tunnel or Holland Tunnel		$12.00
	If entering or exiting the CBD via the Queens-Midtown Tunnel or Hugh L. Carey Tunnel		$6.00
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$6.00	
3	Multi-unit trucks, including articulated trucks where a power unit is carrying one or more trailers		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$36.00	
	Peak period per-trip credit		
	If entering the CBD via the Lincoln Tunnel or Holland Tunnel		$20.00
	If entering or exiting the CBD via the Queens-Midtown Tunnel or Hugh L. Carey Tunnel		$10.00
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$9.00	
4	Buses, including vehicles registered with the DMV and plated as a bus, omnibus, or have other designated official plates		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$24.00	
	Peak period per-trip credit		
	If entering the CBD via the Lincoln Tunnel or Holland Tunnel		$12.00
	If entering or exiting the CBD via the Queens-Midtown Tunnel or Hugh L. Carey Tunnel		$6.00
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$6.00	
	Licensed sightseeing buses		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$36.00	
	Peak period per-trip credit		
	If entering the CBD via the Lincoln Tunnel or Holland Tunnel		$20.00
	If entering or exiting the CBD via the Queens-Midtown Tunnel or Hugh L. Carey Tunnel		$10.00
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$9.00	
5	Motorcycles		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$7.50	
	Peak period per-trip credit (maximum daily credit $2.50)		
	If entering the CBD via the Lincoln Tunnel or Holland Tunnel		$2.50
	If entering or exiting the CBD via the Queens-Midtown Tunnel or Hugh L. Carey Tunnel		$1.25
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$1.75	

E-ZPass CBD entry charges are available subject to terms, conditions, and agreements established by the Authority.

The Authority reserves the right to determine whether any vehicle is of unusual or unconventional design, weight, or construction and therefore not within any of the listed categories. The Authority also reserves the right to determine the CBD charge for any such vehicle of unusual or unconventional design, weight, or construction. Any single unit vehicle identified as belonging to Classes 1, 2, or 5 will be up-classed to the next toll class when towing a trailer or another vehicle.

Daily toll cap of once per day for Class 1 and Class 5 vehicles. Caps for other vehicles are subject to change pursuant to the adaptive management approach to mitigating project effects, as committed to in the Final Environmental Assessment.

CBD entry charges and tunnel credits are subject to a variable percentage increase/decrease of up to 10% for up to one year after implementation pursuant to the adaptive management approach to mitigating project effects, as committed to in the Final Environmental Assessment.

The Low-Income Discount Plan shall continue for five years as committed to in the Final Environmental Assessment.

The Authority reserves the right to charge a 25% higher CBD charge during Gridlock Alert Days. Each year, the NYCDOT identifies Gridlock Alert Days during the UN General Assembly and throughout the holiday season when heavy traffic is expected in Manhattan. On Gridlock Alert Days, consider walking, biking, or taking mass transit for any trips in Manhattan.

Qualifying authorized emergency vehicles and qualifying vehicles transporting persons with disabilities are exempt pursuant to Vehicle and Traffic Law § 1704-a (2).

Qualifying authorized commuter buses and specialized government vehicles, as determined by the Authority, are exempt.

Figure 2.1 Adopted Toll Structure (Cont'd)

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY CENTRAL BUSINESS DISTRICT (CBD) CHARGES			
b	Customers Using Fare Media Other Than E-ZPass VEHICLE CLASSIFICATION	CBD ENTRY CHARGE	PER TRIP CHARGE PLAN* (TO/FROM/WITHIN/ THROUGH CBD)
1	Passenger and other vehicles, including sedans, sport utility vehicles, station wagons, hearses, limousines, pickup trucks with factory beds, pickup trucks with caps below the roofline and not extending over the sides, and vans without an extended roof above the windshield		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$22.50	
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$5.50	
2	Single-unit trucks, including non-articulated trucks, pickup trucks with modified beds, vans with modified body behind the drivers cab, pickup trucks with caps above the roofline or extending over the sides, and vans with an extended roof above the windshield		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$36.00	
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$9.00	
3	Multi-unit trucks, including articulated trucks where a power unit is carrying one or more trailers		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$54.00	
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$13.50	
4	Buses, including vehicles registered with the DMV and plated as a bus, omnibus, or have other designated official plates		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$36.00	
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$9.00	
	Licensed sightseeing buses		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$54.00	
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$13.50	
5	Motorcycles		
	Peak period (5am-9pm weekdays, 9am-9pm weekends)	$11.25	
	Overnight period (9pm-5am weekdays, 9pm-9am weekends)	$2.75	
	NYC TLC taxis, green cabs, for-hire vehicles (FHVs)		
	Taxis, green cabs, and FHVs on trips		$1.25
	FHVs on trips dispatched by high-volume for-hire services (HVFHSs)		$2.50

The Authority reserves the right to determine whether any vehicle is of unusual or unconventional design, weight, or construction and therefore not within any of the listed categories. The Authority also reserves the right to determine the CBD charge for any such vehicle of unusual or unconventional design, weight, or construction. Any single unit vehicle identified as belonging to Classes 1, 2, or 5 will be up-classed to the next toll class when towing a trailer or another vehicle.

Daily toll cap of once per day for Class 1 and Class 5 vehicles. Caps for non-passenger vehicles are subject to change pursuant to the adaptive management approach to mitigating project effects, as committed to in the Final Environmental Assessment.

NYC TLC taxi, green cab, and FHV tolls are to be paid by the passenger pursuant to Rules of City of NY Taxi & Limousine Comm (35 RCNY) §§ 58-26 (f), 59A-23 (b), 59D-17 (c).

CBD entry charges and per trip charges are subject to a variable percentage increase/decrease of up to 10% for up to one year after implementation pursuant to the adaptive management approach to mitigating project effects, as committed to in the Final Environmental Assessment.

The Authority reserves the right to charge a 25% higher CBD charge during Gridlock Alert Days. Each year, the NYCDOT identifies Gridlock Alert Days during the UN General Assembly and throughout the holiday season when heavy traffic is expected in Manhattan. On Gridlock Alert Days, consider walking, biking, or taking mass transit for any trips in Manhattan.

Qualifying authorized emergency vehicles and qualifying vehicles transporting persons with disabilities are exempt pursuant to Vehicle and Traffic Law § 1704-a (2).

Qualifying authorized commuter buses and specialized government vehicles, as determined by the Authority, are exempt.

**Subject to full execution of and compliance with plan agreement by FHV bases and taxi technology system providers.*

Draft, Privileged and Confidential – for discussion purposes only; data still being assessed.

Table 2.1 - Modified Final EA Table 2-3. Tolling Scenarios Evaluated for the CBD Tolling Alternative – with the Adopted Toll Structure Added

PARAMETER	SCENARIO A Base Plan	SCENARIO B Base Plan with Caps and Exemptions	SCENARIO C Low Crossing Credits for Vehicles Using Tunnels to Access the CBD, with Some Caps and Exemptions	SCENARIO D High Crossing Credits for Vehicles Using Tunnels to Access the CBD	SCENARIO E High Crossing Credits for Vehicles Using Tunnels to Access the CBD, with Some Caps and Exemptions	SCENARIO F High Crossing Credits for Vehicles Using Manhattan Bridges and Tunnels to Access the CBD, with Some Caps and Exemptions	SCENARIO G Base Plan with Same Tolls for All Vehicle Classes	ADOPTED TOLL STRUCTURE
Time Periods[1]								
Peak: Weekdays	6 AM – 8 PM	6 AM – 8 PM	6 AM – 8 PM	6 AM – 8 PM	6 AM – 8 PM	6 AM – 10 AM; 4 PM – 8 PM	6 AM – 8 PM	5 AM – 9 PM[2]
Peak: Weekends	10 AM – 10 PM	10 AM – 10 PM	10 AM – 10 PM	10 AM – 10 PM	10 AM – 10 PM	10 AM – 10 PM	10 AM – 10 PM	9 AM – 9 PM
Off Peak: Weekdays	8 PM – 10 PM	8 PM – 10 PM	8 PM – 10 PM	8 PM – 10 PM	8 PM – 10 PM	10 AM – 4 PM	8 PM – 10 PM	9 PM – 5 AM
Overnight: Weekdays	10 PM – 6 AM	10 PM – 6 AM	10 PM – 6 AM	10 PM – 6 AM	10 PM – 6 AM	8 PM – 6 AM	10 PM – 6 AM	
Overnight: Weekends	10 PM – 10 AM	10 PM – 10 AM	10 PM – 10 AM	10 PM – 10 AM	10 PM – 10 AM	10 PM – 10 AM	10 PM – 10 AM	9 PM – 9 AM
Potential Crossing Credits								
Credit Toward CBD Toll for Tolls Paid at Tunnel Entries	No	No	Yes - Low	Yes - High	Yes - High	Yes - High	No	Yes - Low
Credit Toward CBD Toll for Tolls Paid at Bridges to Manhattan	No	No	No	No	No	Yes - High	No	No
Potential Exemptions and Limits (Caps) on Number of Tolls per Day[4,5]								
Autos, motorcycles, and mercial vans	Once per day	Once per day	Once per day	Once per day	Once per day	Once per day	Once per day	Once per day
Taxis	No cap	Once per day	Exempt	No cap	Exempt	Once per day	No cap	$1.25 per trip toll on trips to, within, or from the CBD (see note 4)
FHVs	No cap	Once per day	Three times per day	No cap	Three times per day	Once per day	No cap	$2.50 per trip toll on trips to, within, or from the CBD (see note 4)
Small and large trucks	No cap	Twice per day	No cap	No cap	No cap	Once per day	No cap	No cap
Buses	No cap	Exempt	No cap	No cap	Transit buses – Exempt No cap on other buses	Exempt	No cap	Certain buses – Exempt (see note 5)

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PARAMETER	SCENARIO A Base Plan	SCENARIO B Base Plan with Caps and Exemptions	SCENARIO C Low Crossing Credits for Vehicles Using Tunnels to Access the CBD, with Some Caps and Exemptions	SCENARIO D High Crossing Credits for Vehicles Using Tunnels to Access the CBD	SCENARIO E High Crossing Credits for Vehicles Using Tunnels to Access the CBD, with Some Caps and Exemptions	SCENARIO F High Crossing Credits for Vehicles Using Manhattan Bridges and Tunnels to Access the CBD, with Some Caps and Exemptions	SCENARIO G Base Plan with Same Tolls for All Vehicle Classes	ADOPTED TOLL STRUCTURE
Approximate Toll Rate Assumed for Autos, Commercial Vans, and Motorcycles[3]								
Peak	$9	$10	$14	$19	$23	$23	$12	$15
Off Peak	$7	$8	$11	$14	$17	$17	$9	$3.75
Overnight	$5	$5	$7	$10	$12	$12	$7	$3.75
Approximate Toll Rate Assumed for Trucks (Small Trucks/Large Trucks)[3]								
Peak	$18 / $28	$20 / $30	$28 / $42	$38 / $57	$46 / $69	$65 / $82	$12 / $12	$24 / $36
Off Peak	$14 / $21	$15 / $23	$21 / $32	$29 / $43	$35 / $52	$49 / $62	$9 / $9	
Overnight	$9 / $14	$10 / $15	$14 / $21	$19 / $29	$23 / $35	$33 / $41	$7 / $7	$6 / $9

Notes:

[1] Tolls would be higher during peak periods when traffic is greatest. All tolling scenarios include a higher toll on designated "Gridlock Alert" days, although the modeling conducted for the Project does not reflect this higher toll since it considers typical days rather than days with unusually high traffic levels.

[2] The adopted toll structure has a simplified two-time-period structure (i.e., peak and overnight) on weekdays, as opposed to the three-time-period (i.e., peak, off-peak, and overnight) weekday structures studied in the Final EA. As there is no longer an off-peak period on weekdays, the weekday peak and overnight periods are longer than those studied in the Final EA. The transportation modeling conducted for the adopted toll structure accounts for this change in the peak and off-peak periods and thus the model results reflect this change.

[3] Toll rates are for vehicles using E-ZPass and are rounded. For all tolling scenarios, different rates would apply for vehicles not using E-ZPass.

[4] The per-trip tolls for taxis and FHVs in the adopted toll structure would be equivalent to the auto peak rate of $15 (based on 2023 NYC Taxi and Limousine Commission data for average trips per vehicle per day: for taxis the average number of trips with passengers to/from/within the CBD is 12, and for FHVs it is 6).

[5] With the adopted toll structure, qualifying authorized emergency vehicles and qualifying vehicles transporting people with disabilities would be exempt from the toll. Specialized government vehicles would also be exempt. School buses contracted with the NYC Department of Education, commuter vans licensed with the NYC Taxi and Limousine Commission, and buses providing scheduled commuter services open to the public would also be exempt from the toll.

Draft, Privileged and Confidential – for discussion purposes only; data still being assessed.

Table 2.2 - Modified Final EA Table ES-3. Comparison of Evaluation Results for the No Action and CBD Tolling Alternatives – with the Adopted Toll Structure Added

SCREENING CRITERION	NO ACTION ALTERNATIVE	CBD TOLLING (ACTION) ALTERNATIVE FINAL EA SCENARIOS	ADOPTED TOLL STRUCTURE
Purpose and Need: Reduce traffic congestion in the Manhattan CBD in a manner that will generate revenue for future transportation improvements	DOES NOT MEET	MEETS	MEETS
Objective 1: Reduce daily vehicle-miles traveled (VMT) within the Manhattan CBD Criterion: Reduce by 5% (relative to No Action)	DOES NOT MEET	MEETS	MEETS
Daily VMT reduction (2023)	0%	7.1% - 9.2%	8.9%
Objective 2: Reduce the number of vehicles entering the Manhattan CBD daily Criterion: Reduce by 10% (relative to No Action)	DOES NOT MEET	MEETS	MEETS
Daily vehicle reduction (2023)	0%	15.4% - 19.9%	17.3%
Objective 3: Create a funding source for capital improvements and generate sufficient annual net revenues to fund $15 billion for capital projects for MTA's Capital Program	DOES NOT MEET	MEETS[1]	MEETS
Net revenue to support MTA's Capital Program[2]	$0	$1.0 billion - $1.5 billion	$0.9 billion[3]
Objective 4: Establish a tolling program consistent with the purposes underlying the New York State legislation entitled the "MTA Reform and Traffic Mobility Act"	DOES NOT MEET	MEETS	MEETS

Notes:

1 Although Final EA Tolling Scenario B would not meet Objective 3 with the toll rates identified and assessed in the Final EA, additional analysis was conducted to demonstrate that it would meet this objective with a higher toll rate; the resulting VMT reduction and revenue for that modified scenario would fall within the range of the other Final EA scenarios.

2 The net revenue needed to fund $15 billion depends on a number of economic factors, including but not limited to interest rates and term. For the purposes of the Final EA, the modeling assumes the Project should provide at least $1 billion annually in total net revenue, which would be invested or bonded to generate sufficient funds. The net revenue values provided in this table are rounded and based on Project modeling.

3 Following completion of the Final EA, based on current interest rates and expected timing of projects, MTA's Chief Financial Officer has determined that annual net revenues in the range of $0.9 billion should be sufficient to meet the Project's need to fund $15 billion of capital projects for the MTA Capital Program.

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3 Analysis Framework: General Methodology for Reevaluation

To evaluate the adopted toll structure's effects in comparison to those described in the Final EA, the Project Sponsors used the same methodologies as used for the analyses in the Final EA. For each analysis topic, they considered the effects of the adopted toll structure in comparison to the effects for the seven tolling scenarios evaluated in the Final EA. If preliminary evaluation of the adopted toll structure demonstrated that effects would be same as, or less than, those described in the Final EA, more detailed quantified analysis (such as modeling) was not conducted. For any effects where the preliminary evaluation was not conclusive, additional quantified analysis was conducted to further explore the effect.

The following sections of this reevaluation describe the methodologies used for each analysis topic in more detail. Where relevant to the analyses, the reevaluation includes information comparing the Final EA results to results for the adopted toll structure. Those comparisons include tables from the Final EA with the addition of the adopted toll structure, as well as new tables, where appropriate, that were not included in the Final EA. Tables from the Final EA are provided using the same format and color palette as in the Final EA, with the same title as in the Final EA but are modified to indicate the addition of the adopted toll structure as follows:

Table [X.X] - Modified Final EA Table [Number]. Table Title from Final EA – With Adopted Toll Structure Added

PARAMETER FOR COMPARISON	FINAL EA	ADOPTED TOLL STRUCTURE

New tables that were not in the Final EA have new titles and, thus, do not reference the Final EA, use a different color palette and sequential table numbers, as follows:

Table [X.X] - New Title as Appropriate

PARAMETER FOR COMPARISON	FINAL EA	ADOPTED TOLL STRUCTURE

In addition, each section of this reevaluation presents the summary of effects table that was included in the Final EA, but updated to include the adopted toll structure (Table 1.1 in Section 1). In the Final EA, a summary of effects was included in three locations: in Table ES-5 of the "Executive Summary," at the end of each relevant Final EA chapter, and in Table 16-1 of Chapter 16, "Summary of Effects."

4A Transportation – Regional Transportation Effects and Modeling

Subchapter 4A of the Final EA presented the reasonably expected effects of implementing the CBD Tolling Alternative on the regional transportation system, including travel demand and mode choice. This section evaluates the effects of the adopted toll structure on the region's travel characteristics in comparison to the effects presented in the Final EA. Additional information is provide in **Appendix 4A**.

METHODOLOGY

Final EA Methodology

Subchapter 4A of the Final EA described the methodology used for forecasting changes to the regional transportation system in Section 4A.2, "Methodology," with additional supporting information in Final EA Appendix 4A.1. As detailed in the Final EA, the methodology included the following:

- Forecasted changes in travel demand for No Action Alternative and Final EA tolling scenarios using the New York Best Practice Model (BPM).
- Identified reasonably expected effects of implementing the CBD Tolling Alternative on the regional transportation system, including travel demand, mode choice, and traffic diversion.
- Provided for use in the other analyses in the Final EA. As described in the Final EA in Chapter 3, "Environmental Analysis Framework," page 3-5, the Final EA evaluated multiple tolling scenarios within the CBD Tolling Alternative to identify the range of potential effects that could occur from implementing the CBD Tolling Alternative. Quantitative analyses related to traffic patterns (in Final EA Subchapters 4B through 4E as well as the local intersection analyses in Chapters 10, "Air Quality," and 12, "Noise") considered the tolling scenario that would result in the greatest potential negative effects for that particular topic of analysis.

Reevaluation Methodology

- Modeled the adopted toll structure using the same version of the BPM as was used for the Final EA. This allowed comparison of the results for the adopted toll structure to the results presented in each analysis included in the Final EA.
- Provided BPM results for the adopted toll structure for use in the reevaluation of the full range of topics from the Final EA.

ANALYSIS AND FINDINGS

The Final EA presented a summary of the modeling results for the No Action Alternative and Final EA tolling scenarios for the 28-county regional study area, with information for subareas within that study area. Information presented included vehicle-miles traveled (VMT), mode share for journeys to the Manhattan CBD, and number of daily vehicles entering the CBD. This and the more detailed model results were used for the quantified analyses presented in other chapters of the Final EA, including analyses of the CBD Tolling Alternative's effects on traffic, transit, pedestrians, parking, air quality, noise, social conditions, economic conditions, and environmental justice.

For the reevaluation, the BPM was used to calculate the same information for the adopted toll structure as was estimated for the No Action Alternative and tolling scenarios in the Final EA. This information for the adopted toll structure was then used for the quantified analyses of the same topics in the reevaluation. Detailed results are provided in **Appendix 4A**.

Table 4A.1 presents information from the Final EA Table ES-5 summarizing the conclusions related to regional transportation effects and modeling, now modified to include the adopted toll structure.

CONCLUSION

For the reevaluation, the Project Sponsors added the adopted toll structure to the same regional transportation model they used for evaluations in the Final EA, the BPM. The new modeling for the reevaluation produced a full set of results that allowed comparison to the modeling results evaluated in the Final EA. The analysis demonstrates that the adopted toll structure's effects on regional transportation patterns would be within the range of effects of the tolling scenarios studied in the Final EA.

Table 4A.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
4A – Transportation: Regional Transportation Effects and Modeling	Vehicle Volumes	▪ Decreases in daily vehicle trips to Manhattan CBD overall. ▪ Some diversions to different crossings to Manhattan CBD or around the Manhattan CBD altogether, depending on tolling scenario. As traffic, including truck trips, increase on some circumferential highways, simultaneously there is a reduction in traffic on other highway segments to the CBD. ▪ Diversions would increase or decrease traffic volumes at local intersections near the Manhattan CBD crossings. ▪ Overall decrease in vehicle-miles traveled (VMT) in the Manhattan CBD and region overall in all tolling scenarios and some shift from vehicle to transit mode.	Crossing locations to Manhattan CBD	% Increase or decrease in daily vehicles entering the Manhattan CBD relative to No Action Alternative	-15%	-16%	-17%	-19%	-20%	-18%	-17%	No	**No mitigation needed.** Beneficial effects	-17%	No	**No mitigation needed.** Same as Final EA
	Auto Journeys to CBD		Manhattan CBD	% Increase or decrease in worker auto journeys to Manhattan CBD relative to No Action Alternative	-5%	-5%	-7%	-9%	-11%	-10%	-6%	No	**No mitigation needed.** Beneficial effects	-6%	No	**No mitigation needed.** Same as Final EA
				Absolute increase or decrease in daily worker auto trips to Manhattan CBD relative to No Action Alternative	-12,571	-12,883	-17,408	-24,017	-27,471	-24,433	-14,578			-16,447		
	Truck Trips Through CBD		Manhattan CBD	Increase or decrease in daily truck trips through Manhattan CBD (without origin or destination in the CBD) relative to No Action Alternative	-4,645 (-55%)	-4,967 (-59%)	-5,253 (-63%)	-5,687 (-68%)	-6,604 (-79%)	-6,784 (-81%)	-1,734 (-21%)	No	**No mitigation needed.** Beneficial effects	-4,627 (-55%)	No	**No mitigation needed.** Same as Final EA
	Transit Journeys		Manhattan CBD	% Increase or decrease in daily Manhattan CBD-related transit journeys relative to No Action Alternative	+1.2%	+1.2%	+1.7%	+2.2%	+2.5%	+2.1%	+1.5%	No	**No mitigation needed.** No adverse effects	+1.6%	No	**No mitigation needed.** Same as Final EA
	Traffic Results		Manhattan CBD	% Increase or decrease in daily VMT relative to No Action Alternative	-7.8%	-7.6%	-8.0%	-8.7%	-9.2%	-7.1%	-8.4%	No	**No mitigation needed.** Beneficial effects in Manhattan CBD, New York City (non-CBD), north of New York City, and Connecticut; although there would be VMT increases in Long Island and New Jersey, the effects would not be adverse.	-8.9%	No	**No mitigation needed.** Same as Final EA
			NYC (non-CBD)		-0.3%	-0.2%	-0.7%	-0.9%	-1.0%	-0.7%	-0.3%			-0.4%		
			NY north of NYC		-0.2%	-0.2%	-0.4%	-0.6%	-0.8%	-0.5%	-0.3%			-0.4%		
			Long Island		+0.1%	0.0%	-0.1%	-0.2%	-0.2%	0.0%	0.0%			0.0%		
			New Jersey		+0.0%	+0.0%	+0.2%	+0.2%	+0.1%	+0.2%	+0.1%			+0.1%		
			Connecticut		-0.1%	-0.2%	-0.2%	-0.2%	-0.2%	0.0%	-0.2%			-0.3%		

4B Transportation – Highways and Local Intersections

Subchapter 4B of the Final EA presented the assessment of the CBD Tolling Alternative's potential effect on traffic operations on highways and local intersections. This section evaluates the effects of the adopted toll structure on the same key highway segments. It also examines the potential changes in traffic operations at local intersections resulting from the adopted toll structure. Additional information supporting the analyses conducted for the reevaluation is provided in **Appendix 4B**.

METHODOLOGY

Final EA Methodology

The methodology used to evaluate the effects of the CBD Tolling Alternative on traffic operations is described in Subchapter 4B of the Final EA in two sections: the methodology for the highway analysis is presented beginning on page 4B-18 in Section 4B.4.1, "Methodology," and the methodology for the local intersection analysis is presented beginning on page 4B-82 in Section 4B.6.1, "Methodology." See also the summary of the methodology beginning on page 4B-1 in Subchapter 4B. In summary, the Final EA analysis methodology included the following:

Highways

1. Used BPM output to predict changes in traffic volumes at bridges, tunnels, and highways approaching the CBD and bypassing the CBD.
2. Calibrated model results to account for over- or under-assignment by the BPM relative to observed conditions.
3. Used understanding of likely diversions, BPM results, and community concerns to identify specific highway segments for analysis (see Final EA Appendix 4B.1, pages 4B.1-1 through 4B.1-3).
4. Determined the tolling scenario that would be representative of those with the highest potential to increase traffic along certain alternate routes and at local intersections. The highway assessment considered the effects of the CBD Tolling Alternative using the tolling scenario with the highest potential diverted traffic volumes, Tolling Scenario D.
5. Conducted modeling analysis using Vissim model or Highway Capacity Software (HCS) model.
6. Identified adverse effects based on criteria developed among TBTA and NYSDOT in consultation with NYCDOT (see Final EA Subchapter 4B, Section 4B.4.1, pages 4B-20 and 4B-21).
7. Where potential adverse effects were identified, identified measures to avoid, reduce, or mitigate those effects.

Local Intersections

1. Used BPM output to predict changes in traffic volumes at bridges, tunnels, and highways approaching the CBD and bypassing the CBD.

2. Calibrated model results and assigned traffic to local routes.
3. Identified study areas and local intersections for analysis: 102 intersections in 15 different study areas were evaluated.
4. Determined which Final EA tolling scenario to analyze, based on the scenario with the highest number of intersection locations with a potential increase of 50 or more vehicles. Using this method, Tolling Scenario D was identified as having the most number of intersection locations with a potential increase of 50 or more vehicles. Therefore, all 102 intersections were analyzed for Tolling Scenario D. An additional analysis was performed in the Downtown Brooklyn study area for Tolling Scenario C since that tolling scenario produced a larger number of intersections with an increase of 50 or more vehicles (see Final EA Subchapter 4B, Section 4B.6.3, "Potential Traffic Effects at Intersections," first paragraph on page 4B-95). As described in the Final EA, the analysis of potential effects on traffic intersection operations was based on the tolling scenario that would result in the greatest increase in vehicle volumes at the intersections in the study area. This methodology resulted in identification of the most potential negative effects of the CBD Tolling Alternative.
5. Conducted quantified analysis for the 102 intersections using Synchro model
6. Identified adverse effects based on criteria developed among TBTA and NYSDOT in consultation with NYCDOT (see Final EA Subchapter 4B, Section 4B.6.1, pages 4B-85 and 4B-86).
7. Where potential adverse effects were identified, identified measures to avoid, reduce, or mitigate those effects.

Reevaluation Methodology

Highways

1. The first step in the methodology for reevaluation of highways was the same as in the Final EA.
2. The second step in the methodology for reevaluation of highways was the same as in the Final EA.
3. Determined incremental traffic volumes for the adopted toll structure at the 10 highway segments identified and evaluated in the Final EA.
4. For highway segments where a higher incremental volume would occur under the adopted toll structure, and for all highway segments predicted to have an adverse effect in the Final EA, conducted further evaluation of the effects resulting from adopted toll structure.

Local Intersections

1. The first step in the methodology for reevaluation of intersections was the same as in the Final EA.
2. Calibrated model results and assigned traffic to local routes in the 15 study areas identified in the Final EA
3. Identified intersections with higher increments under the adopted toll structure than in Tolling Scenario C or D, as appropriate, in the Final EA.
4. Conducted quantified analysis using Synchro models of the study areas for which:
    - Any intersection in the study area had a higher incremental volume than described in the Final EA
    - The Final EA predicted a potential adverse effect at one or more intersections.

ANALYSIS AND FINDINGS

Highways

The Final EA identified three highway segments with potential adverse effects. Reevaluation of the adopted toll structure identifies potential adverse effects at the same three highway segments, as discussed below. No additional mitigation is needed beyond the mitigation commitments of the Final EA.

For the reevaluation, seven highway segments screened in for further evaluation based on step 4 of the reevaluation methodology (see **Table 4B.1**). Of these, additional analysis identified potential adverse effects for the same three segments as described in the Final EA: Queens-Midtown Tunnel–Long Island Expressway (I-495), George Washington Bridge/Cross Bronx Expressway, and FDR Drive between East 10th Street and Brooklyn Bridge. **Table 4B.1** below compares the results of the screening analysis conducted in the Final EA to the results with the reevaluation.

As shown in **Table 4B.1**, on the Long Island Expressway (I-495) at the Queens-Midtown Tunnel, the adopted toll structure would result in an adverse effect in the morning peak hour, with a delay of approximately 4 minutes (an increase in traffic volume of approximately 8.5 percent over the No Action Alternative), whereas no adverse effect was predicted for the morning peak hour at this location in the Final EA. At the same location, the adverse effect in the midday peak hour that was predicted in the Final EA, with a delay of approximately 4 minutes and an increase in traffic volume of 15 percent over the No Action Alternative, would no longer occur with the adopted toll structure.

For the other two highway segments—the George Washington Bridge/Cross Bronx Expressway and FDR Drive between East 10th Street and Brooklyn Bridge—the effects would be lessened under the adopted toll structure when compared to the Final EA, as the incremental volumes caused by the adopted toll structure would be less than with the tolling scenario analyzed in the Final EA.

The mitigation presented in the Final EA would remain effective for each of these locations.

No adverse effects would occur at the other four highway segments with the adopted toll structure.

Table 4B.1 - Effects on Highway Segments in Final EA and Adopted Toll Structure

HIGHWAY SEGMENTS FOR ANALYSIS	FINAL EA: POTENTIAL ADVERSE EFFECTS*	ADOPTED TOLL STRUCTURE		
		FURTHER EVALUATION CONDUCTED	POTENTIAL ADVERSE EFFECTS	INTENSITY OF EFFECT
Lincoln Tunnel/NJ Route 495	No	No	No	
Holland Tunnel/I-78/NJ Route 138	No	No	No	
Queens-Midtown Tunnel – LI Expwy (I-495)	**Yes -** Midday	✓	**Yes -** AM	Delay of 4 minutes in the AM, comparable to the 4 minutes of delay in the midday in the Final EA; volume increase of 8.5% in the AM is less than the 15% in the midday in the Final EA
Hugh L. Carey Tunnel – Gowanus Expressway	No	✓	No	
George Washington Bridge/Cross Bronx Expwy	**Yes -** Midday	Qualitative	**Yes** - Midday	Incremental volume for the adopted toll structure (702 vph) is lower than in the Final EA (826 vph)
Verrazzano-Narrows Bridge/Staten Island Expwy	No	No	No	
FDR Drive – Between E. 10th Street and Brooklyn Bridge	**Yes -** PM	Qualitative	**Yes -** PM	Incremental volume for the adopted toll structure (413 vph) is at the lower end of the range predicted in the Final EA across the seven tolling scenarios studied (404 vph – 666 vph)
Bayonne Bridge	No	✓	No	
Robert F. Kennedy Bridge	No	✓	No	
I-95 Eastern Spur	No	✓	No	

* See Table 4B-27 in the Final EA, page 4B-79.

Local Intersections

Based on the methodology for evaluation of local intersections, 14 of the 102 intersections had higher incremental volumes with the adopted toll structure than identified in the Final EA. Those 14 intersections were located in nine study areas. Thus, those nine study areas, with a total of 71 intersections, were reevaluated. In the nine study areas, further analysis demonstrated that only one of these intersections would have a potential adverse effect under the adopted toll structure—at East 125th Street and Second Avenue in the Robert F. Kennedy Bridge Manhattan study area during the PM peak hour, with a delay of 20.4 seconds. At this location, the Final EA identified adverse effects during both the AM and PM peak periods, with a delay of up to 52.2 seconds. The mitigation commitment described in the Final EA would remain effective at this location under the adopted toll structure.

In addition, the Final EA also identified adverse effects at three additional intersections that would no longer occur under the adopted toll structure.

Table 4B.2 compares the results predicted in the Final EA for local intersections to the results for the adopted toll structure. More information, including traffic volumes and detailed level-of-service analysis results, is provided in an appendix. Detailed analysis results are presented in **Appendix 4B**.

Table 4B.3 presents information from the Final EA Table ES-5 summarizing the conclusions related to traffic effects on highways and at local intersections, now modified to include the adopted toll structure.

Table 4B.2 - Effects on Local Intersections Final EA and Adopted Toll Structure

FINAL EA STUDY AREAS	FINAL EA		ADOPTED TOLL STRUCTURE						
			ANALYSIS BASED ON SCREENING THRESHOLD**						
	Potential Adverse Effects	Number of Intersections with Adverse Effect	AM	Midday	PM	Late Night	Potential Adverse Effects	Number of Intersections with Adverse Effect	Intensity of Potential Effects
Bklyn Bridge/Manhattan Br–Downtown Brooklyn	No		✓			✓	No		
Hugh L. Carey Tunnel and Holland Tunnel–Lower Manhattan, Brooklyn Bridge, and Manhattan Bridge (impacts at one intersection)	Midday	1		☒		✓	No		
Hugh L. Carey Tunnel–Red Hook, Brooklyn	No		✓	✓		✓	No		
Holland Tunnel–Jersey City, NJ	No						No		
Lincoln Tunnel–Manhattan	No						No		
Ed Koch Queensboro Bridge–East Side at 60th St–Manhattan	No					✓	No		
West Side at 60th St–Manhattan	No						No		
Queens-Midtown Tunnel/Ed Koch Queensboro Bridge–Long Island City–Queens	No		✓			✓	No		
Queens-Midtown Tunnel–Murray Hill–Manhattan (impacts at two intersections)	**Yes:** Midday, Late Night	2 total: 1 Midday, 1 Late Night		☒		☒	No		
RFK Bridge–Manhattan	**Yes:** AM, PM	1 total (both AM and PM)	☒		☒	✓	**Yes:** PM	1	PM intersection delay increase of 20.4 seconds with the adopted toll structure, less than the 52.2-second delay increase predicted in the Final EA
RFK Bridge–Queens	No						No		
RFK Bridge–Bronx	No						No		
West Side Highway / Route 9A at West 24th St–Manhattan	No						No		
Lower East Side–Manhattan	No		✓	✓	✓	✓	No		
Little Dominican Republic–Manhattan	No		✓	✓	✓	✓	No		

* See Final EA Section 4B.6.3, "Environmental Consequences," and Table 4B-30 on page 4B-95.

** Intersection study areas screening thresholds for re-analysis:

✓ Study area / time period where the adopted toll structure has a higher traffic increment than the Final EA scenario analyzed

☒ Study area / time period where the Final EA identified potential adverse effect

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CONCLUSION

The analysis conducted for the reevaluation considered the effects of the adopted toll structure on traffic conditions on highways and at local intersections using the same methodology as used for the Final EA. With the adopted toll structure, potential adverse effects would occur on the same three highway segments as identified in the Final EA, but the forecasted traffic volumes at those locations under the adopted toll structure would be lower than the volumes evaluated in the Final EA and no new mitigation is required. At local intersections, one intersection would have a potential adverse effect under the adopted toll structure, in comparison to four intersections identified in the Final EA. The effect at the location with the adverse effect would be lessened with the adopted toll structure and the proposed mitigation would remain effective. Therefore, the reevaluation demonstrates that the Final EA remains valid. With the adopted toll structure, no new potential adverse effects would occur and no additional mitigation is needed. The Project Sponsors remain committed to the mitigation described in the Final EA.

Table 4B.3 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO (A, B, C, D, E, F, G)	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
4B – Transportation: Highways and Local Intersections	Traffic – Highway Segments	The introduction of the CBD Tolling Program may produce increased congestion on highway segments approaching on circumferential roadways used to avoid Manhattan CBD tolls, resulting in increased delays and queues in midday and PM peak hours on certain segments in some tolling scenarios: ▪ Westbound Long Island Expressway (I-495) near the Queens-Midtown Tunnel (midday) Approaches to westbound George Washington Bridge on I-95 (midday) ▪ Southbound and northbound FDR Drive between East 10th Street and Brooklyn Bridge (PM) ▪ Other locations will see an associated decrease in congestion particularly on routes approaching the Manhattan CBD	10 highway segments (AM)	Highway segments with increased delays and queues in peak hours that would result in adverse effects	0 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D)	Yes	**Mitigation needed.** The Project Sponsors will implement a monitoring plan prior to implementation with post-implementation data collected approximately three months after the start of tolling operations and including thresholds for effects; if the thresholds are reached or crossed, the Project Sponsors will implement Transportation Demand Management (TDM) measures, such as ramp metering, motorist information, signage at all identified highway locations with adverse effects upon implementation of the Project. NYSDOT owns and maintains the relevant segments of the Long Island Expressway and I-95. The relevant segment of the FDR Drive is owned by NYSDOT south of Montgomery Street and NYCDOT north of Montgomery Street. Implementation of TDM measures will be coordinated between the highway owners and the owners of any assets relevant to implementing the TDM. Post-implementation of TDM measures, the Project Sponsors will monitor effects and, if needed, TBTA will modify the toll rates, crossing credits, exemptions, and/or discounts to reduce adverse effects.	AM - 1 out of 10 highway corridors (Westbound Long Island Expressway (I-495) near the Queens-Midtown Tunnel)	Yes	**No additional mitigation needed.** The Project Sponsors will implement the mitigation commitments of the Final EA.
			10 highway segments (midday)		2 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F			Midday - 1 out of 10 highway corridors (approaches to westbound George Washington Bridge on I-95)		
			10 highway segments (PM)		1 out of 10 highway corridors in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F			PM - 1 out of 10 highway corridors (Southbound and northbound FDR Drive between East 10th Street and Brooklyn Bridge)		
	Intersections	Shifts in traffic patterns, with increases in traffic at some locations and decreases at other locations, would change conditions at some local intersections within and near the Manhattan CBD. Of the 102 intersections analyzed, most intersections would see reductions in delay. Potential adverse effects on four local intersections in Manhattan: ▪ Trinity Place and Edgar Street (midday) ▪ East 36th Street and Second Avenue (midday) ▪ East 37th Street and Third Avenue (midday) ▪ East 125th Street and Second Avenue (AM, PM)	4 locations	Number of locations with potential adverse effects that will be addressed with signal timing adjustments	4 in the analyzed tolling scenario (Tolling Scenario D), as well as Tolling Scenarios E and F	Yes	Mitigation needed. NYCDOT will monitor those intersections where potential adverse effects were identified and implement appropriate signal timing adjustments to mitigate the effect, per NYCDOT's normal practice. **Enhancement** Refer to the overall enhancement on monitoring at the end of this table.	Potential adverse effects at **1 location:** East 125th Street at Second Avenue (PM)	Yes	**No additional mitigation needed.** The mitigation commitment remains for East 125th Street at Second Avenue; for the other three locations identified in the Final EA, NYCDOT is maintaining the commitment to implement the measures identified in the Final EA as an enhancement.

OVERALL PROJECT ENHANCEMENT. The Project Sponsors commit to ongoing monitoring and reporting of potential effects of the Project, including for example, traffic entering the CBD, vehicle-miles traveled in the CBD; transit ridership from providers across the region; bus speeds within the CBD; air quality and emissions trends; parking; and Project revenue. Data will be collected in advance and after implementation of the Project. A formal report on the effects of the Project will be issued one year after implementation and then every two years. In addition, a reporting website will make data, analysis, and visualizations available in open data format to the greatest extent practicable. Updates will be provided on at least a bi-annual basis as data becomes available and analysis is completed. This data will also be used to support an adaptive management approach to monitoring the efficacy of mitigation, and adjustments as warranted.

4C Transportation – Transit

Subchapter 4C of the Final EA presented the assessment of the CBD Tolling Alternative on transit operations throughout the 28-county regional study area, including capacity of transit services (line-haul capacity) and effects on operations within individual transit stations. This section evaluates the effects of the adopted toll structure on the transit lines and stations. More detailed results of the analysis conducted for the reevaluation are provided in **Appendix 4C**.

METHODOLOGY

Final EA Methodology

As described in detail in the Final EA Section 4C.2, "Methodology and Assumptions," the Final EA analysis of transit used screening assessments followed by qualitative and/or quantified analyses conducted in coordination with the operating agency for the potentially affected transit service, consistent with evaluation procedures recommended in New York City's *City Environmental Quality Review (CEQR) Technical Manual*.

NYC's CEQR guidelines were used for analysis of New Jersey transit services (NJ TRANSIT, PATH, and suburban buses that enter the Manhattan CBD) because NJ TRANSIT and the Port Authority of New York and New Jersey (PANYNJ) do not have alternative guidelines. In coordination with Metro-North Railroad and Long Island Rail Road, CEQR methodologies were also used to assess commuter rail lines and stations.

Line-Haul

<u>Subways and Commuter Rail</u>

1. Identified transit lines with more than 200 new peak-hour passengers in a single direction at maximum load point for the tolling scenario with the highest incremental transit ridership increase. The scenario with the highest incremental transit ridership increase for each subway and commuter rail line was used for the next steps in the analysis.
2. For transit lines above the 200-passenger screening threshold, evaluated the number of new passengers per train and car in the peak-hour.
3. Potential adverse effects were identified for any transit services where the Project increment would add more than 5 passengers per car and the service would operate above its guideline capacity (no subway or commuter rail lines exceeded this threshold in the Final EA, and there was no potential adverse effect on subways or commuter rail line-haul capacity).

<u>Buses</u>

1. Identified bus routes with more than 50 new passengers per hour, per direction, at maximum load point for the tolling scenario with the highest incremental transit ridership increase. The scenario with the highest incremental transit ridership increase for each bus route cordon grouping was used for the next steps in the analysis.

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2. For bus routes above the 50-passenger threshold, evaluated the number of incremental passengers per trip and calculated the volume-to-capacity (v/c) ratio that would result with the new passengers.

3. Potential adverse effects were identified for bus routes where the v/c ratio would be greater than 1.00, indicating that demand would be greater than capacity (no bus routes exceeded this threshold in the Final EA, and there was no potential adverse effects on bus line-haul capacity).

Stations

1. Identified transit stations with more than 200 new passengers in the peak hour for the tolling scenario with the highest incremental transit ridership increase (excluding cross-platform transfers between trains). Because Tolling Scenario E projected the highest transit system ridership, it was selected as the tolling scenario for detailed analysis of stations requiring further analysis (except at one location in Newark, New Jersey—for both PATH and NJ TRANSIT—where Tolling Scenario C was selected for its greater station ridership increase).
2. For transit stations above the 200-passenger screening threshold, conducted qualitative analysis of station, or quantified analysis of effect on station elements (stairs, escalators, passageways, turnstiles, and fare arrays), in coordination with the station operator.

Reevaluation Methodology

Line-Haul

1. Identified incremental passenger increases from the adopted toll structure at maximum load points for subway, commuter rail, and bus lines.
2. Identified lines with higher increment than Final EA tolling scenario analyzed at those locations.
3. Using the same methodology as the Final EA, conducted analysis for lines where both:
   - Increments met CEQR screening threshold for analysis (200 new peak-hour passengers for subways and commuter rail; 50 new passengers per hour, per direction, at maximum load point for buses)
   - Increments were higher than the Final EA

   If the line met the screening threshold for increased passengers, but the increase was less than that where no adverse effects were found after detailed analysis in the Final EA, then no further detailed analysis was necessary.

Stations

1. Identified incremental passenger increases from the adopted toll structure at transit stations.
2. Using the same methodology as in the Final EA, identified transit stations with more than 200 new passengers in the peak hour due to the adopted toll structure (excluding cross-platform transfers between trains).
3. Using the same methodology as the Final EA, conducted analysis for stations where both:
   - Increments met CEQR screening threshold for analysis

- Increments were higher than the Final EA

If the station met the screening threshold for increased passengers, but the increase was less than that where no adverse effects were found after detailed analysis in the Final EA, then no further detailed analysis was necessary.

ANALYSIS AND FINDINGS

BPM results indicate that overall transit ridership projections with the adopted toll structure would be comparable to those assessed in the Final EA. The adopted toll structure would result in slightly lower subway, bus, and commuter rail boardings than analyzed in the Final EA Scenario E (the scenario with highest overall transit boardings), with the exception of boardings on Metro North Railroad, where the increase would not result in an adverse effect as indicated below. **Table 4C.1** provides a comparison of total transit ridership by mode in the AM peak four-hour period for the Final EA tolling scenarios and the adopted toll structure.

Line-Haul

Considering the effect of the adopted toll structure on individual subway and commuter rail lines, the adopted toll structure would result in incremental passenger volumes above the screening threshold on one commuter rail line: the Metro-North Railroad New Haven Line (see **Table 4C.2**). On that route, the adopted toll structure would result in 437 additional peak-hour passengers (over the No Action), in comparison to 212 new passengers evaluated in the Final EA. Overall, the increase on the New Haven Line would be equivalent to 2.6 new passengers per train car, which is lower than the CEQR threshold of five additional passengers per train car. Therefore, the adopted toll structure would not result in adverse effects on line-haul capacity on the New Haven Line.

For bus routes, the 13 New Jersey/West of Hudson bus lines (via Holland Tunnel) would see an overall 1.9 percent increase in passengers at the maximum load point with the adopted toll structure, compared to a range of -1.4 to 1.4 percent change in passengers for the Final EA tolling scenarios. The maximum increase per-direction at the maximum load point on a single line was 8 new riders, which is lower than the CEQR threshold of 50 new riders. Therefore the adopted toll structure would not result in adverse effects on line-haul capacity on any West of Hudson bus lines.

Table 4C.1 - Modified Final EA Table 4C-6. Transit Ridership: No Action Alternative and CBD Tolling Alternative (2023 AM Peak Period) – with the Adopted Toll Structure Added

MODE	NO ACTION ALTERNATIVE	TOLLING SCENARIO A	TOLLING SCENARIO B	TOLLING SCENARIO C	TOLLING SCENARIO D	TOLLING SCENARIO E	TOLLING SCENARIO F	TOLLING SCENARIO G	ADOPTED TOLL STRUCTURE
Subway	**3,138,960**	**3,184,961**	**3,187,374**	**3,192,428**	**3,199,370**	**3,203,052**	**3,199,783**	**3,197,389**	**3,190,362**
New York City Transit	3,005,224	3,050,101	3,052,683	3,056,840	3,063,552	3,066,614	3,063,577	3,061,455	3,054,862
Port Authority Trans-Hudson (PATH)	133,736	134,860	134,691	135,588	135,818	136,438	136,206	135,934	135,500
Commuter and Intercity Rail	**454,520**	**456,755**	**457,863**	**459,632**	**461,634**	**463,108**	**462,013**	**458,867**	**459,622**
Long Island Rail Road	142,651	143,452	143,989	144,244	144,733	145,544	144,560	144,084	144,103
Metro-North Railroad	152,203	153,128	153,437	154,108	154,850	154,296	155,020	153,491	154,348
NJ TRANSIT	159,666	160,175	160,437	161,280	162,051	163,268	162,433	161,292	161,171
Buses	**2,689,564**	**2,718,960**	**2,717,506**	**2,724,787**	**2,724,456**	**2,727,512**	**2,726,657**	**2,718,457**	**2,721,174**
MTA buses	2,037,319	2,063,136	2,062,997	2,068,001	2,067,753	2,069,107	2,068,898	2,062,926	2,064,522
NJ TRANSIT	471,109	474,344	473,456	474,079	474,279	476,321	475,663	474,260	475,149
Other	181,136	181,480	181,053	182,707	182,424	182,084	182,096	181,271	181,503
Other Transit	**58,635**	**60,073**	**60,225**	**60,467**	**60,474**	**60,475**	**60,712**	**60,246**	**60,335**
Ferries	57,548	58,966	59,120	59,358	59,363	59,360	59,598	59,140	59,216
Tramway	1,087	1,107	1,105	1,109	1,111	1,115	1,114	1,106	1,118
TOTAL	**6,341,679**	**6,420,749**	**6,422,968**	**6,437,314**	**6,445,934**	**6,454,147**	**6,449,165**	**6,434,959**	**6,431,493**

Source: WSP, Best Practice Model 2023, 2021 and NYMTC Hub Bound Travel Data Report 2019.

Note: Data total over a 4-hour period, defined as total boardings, which include transfers. (Because this ridership estimate includes transfers, the ridership reported is greater than MTA NYCT MetroCard data that is widely available.) The BPM includes MTA buses, NJ TRANSIT buses, smaller regional bus carriers, and private carriers. (Other smaller carriers and private carriers are included under "Other Buses.") Tramway volumes were calculated using an incremental change factor derived from Queens/Roosevelt Island sector change per each tolling scenario.

Table 4C.2 - Line-Haul Analysis Summary

MODE – SECTOR/GROUP	TOTAL NUMBER OF LINES	NUMBER OF LINES REQUIRING FURTHER ANALYSIS		NUMBER OF LINES WITH POTENTIAL ADVERSE EFFECT	
		Final EA	Adopted Toll Structure	Final EA	Adopted Toll Structure
Subway					
Manhattan – 60th Street	**11**	**3**	0	0	0
Queens	**8**	**4**	0	0	0
Brooklyn	**15**	**4**	0	0	0
New Jersey (PATH)	**4**	**1**	0	0	0
Commuter Rail					
Manhattan – 60th Street	**3**	**3**	**1**	0	0
Queens	**10**	**1**	0	0	0
New Jersey	**4**	0	0	0	0
Bus					
Manhattan local buses	**16**	0	0	0	0
Bronx express buses	**11**	0	0	0	0
Queens local and express buses (via Ed Koch Queensboro Bridge)	**3**	0	0	0	0
Queens express buses (via Queens-Midtown Tunnel)	**33**	0	0	0	0
Brooklyn local and express buses	**7**	0	0	0	0
Staten Island express routes (via Brooklyn)	**16**	0	0	0	0
Staten Island express routes (via NJ)	**5**	0	0	0	0
NJ/West of Hudson buses (via Holland Tunnel)	**13**	0	0	0	0
NJ/West of Hudson buses (via Lincoln Tunnel)	**104**	0	0	0	0

Stations

In the Final EA, the initial screening evaluation conducted for the Final EA concluded that 26 commuter rail and subway stations were projected to have passenger increases of more than the screening threshold of 200 new peak-hour passengers. The Project Sponsors then consulted with the station operators, which evaluated the potential increases in the context of recent or planned station improvements, station size, and other factors. As a result of that consultation, four station complexes were evaluated qualitatively and found to have no adverse effects due to the Project:

- Grand Central Terminal (subway and commuter rail station)
- Port Authority Bus Terminal (bus and subway station)
- Penn Station New York (commuter rail and subway station)
- Fulton Transit Center (subway station)

The remaining stations were evaluated quantitatively for the Final EA, with analysis of the CBD Tolling Alternative's effects on station elements (stairs and escalators, passageways, and turnstiles / fare arrays).

In the reevaluation, the initial screening evaluation concluded that with the adopted toll structure, three stations would have passenger increases of more than the screening threshold—i.e., more than 200 new peak-hour passengers and higher than Final EA Tolling Scenario E: Grand Central Terminal, Court Square Station, and Main Street–Flushing Station (see **Table 4C.3**). These were evaluated using the same approach as in the Final EA: qualitative analysis for Grand Central Terminal (for which the Final EA identified no adverse effect) and quantitative analysis for Court Square and Main Street–Flushing Stations (for which the Final EA identified adverse effects). More detailed results of the analysis conducted for the reevaluation are provided in **Appendix 4C**. The results of this analysis were as follows (see also **Tables 4C.3 and 4C.4**):

- **Grand Central Terminal (Metro-North Railroad, No. 4, 5, 6, 7 and S subway lines)**:
  - 3 percent higher passenger volume than Final EA Tolling Scenario E (18 more passengers)
  - Considering planned and under-construction capacity improvements, and the modest change as compared to the Final EA, this increase would result in the same conclusion of no new adverse effects.
- **Main Street-Flushing station (No. 7 subway line):**
  - 10 percent higher passenger volume than Final EA Tolling Scenario E (27 more passengers)
  - The Final EA identified a potential adverse effect at street escalator 456. The Final EA's proposed mitigation of increasing the escalator speed would mitigate the adverse effect. There would also be a potential adverse effect at this station with the adopted toll structure; it would be mitigated by the increase in elevator speed. There are no new adverse effects.
- **Court Square station (No. 7, E/M, and G subway lines):**
  - 2 percent higher passenger volume than Final EA Tolling Scenario E (5 more passengers)
  - The Final EA identified a potential adverse effect at platform stair Flushing P2/P4. The Final EA's proposed mitigation – constructing a new stair from the northern end of the No. 7 platform to the street – would mitigate the potential adverse effect. The effect at this station would also be adverse with the adopted toll structure and would be mitigated by the new stair.. There are no new adverse effects.

At other stations where the Final EA predicted adverse effects, the adopted toll structure would result in lower volumes than evaluated in the Final EA in Tolling Scenario E—the Hoboken PATH Station, Union Square Station, and 42nd Street–Times Square Station.

At Hoboken Terminal, the reevaluation analysis indicated that the adopted toll structure would result in volumes that are 45 to 50 percent of the Final EA Tolling Scenario E increments. This would result in a stair volume of 141 and 152 incremental passengers in the AM and PM peak hours, respectively, and no potential adverse effect. The mitigation measures identified in the Final EA and FONSI will be implemented as an enhancement (as indicated in **Table 4C.5** below).

At the Union Square and Times Square Stations, even with lower increments under the adopted toll structure, as compared to Tolling Scenario E analyzed in the Final EA, adverse effects may still materialize.

These would be adequately addressed by the mitigation measures described in the Final EA and FONSI. No additional mitigation would be required.

Table 4C.5 presents information from the Final EA Table ES-5 summarizing the conclusions related to transit effects, now modified to include the adopted toll structure.

CONCLUSION

For the Final EA, the Project Sponsors conducted an analysis of the Project's effects on transit services, including line-haul and individual transit stations. For the tolling scenario with the largest increase in transit ridership, they conducted screening assessments followed by qualitative and/or quantitative analyses. For the reevaluation, they used the same methodology for the adopted toll structure and compared the results to those presented in the Final EA. The reevaluation analysis demonstrates that the conclusions of the Final EA remain valid. The adopted toll structure would not result in potential new adverse effects and no additional mitigation is needed. The Project Sponsors remain committed to the mitigation described in the Final EA and FONSI.

Table 4C.3 - Modified Final EA Table 4C-26 & Table 4C-27. Transit Stations with More than 200 Projected New Passengers in the AM and PM Peak Hour (2023), Final EA Tolling Scenario E or C – with the Adopted Toll Structure Added

STATION NAME	OPERATOR	LINE	FINAL EA – TOLLING SCENARIO E OR C		ADOPTED TOLL STRUCTURE	
			AM Peak Net Ons/Offs	PM Peak Net Ons/Offs	AM Peak Net Ons/Offs	PM Peak Net Ons/Offs
New York-Penn Station	LIRR/NJ TRANSIT	—	1,380	1,380	680	680
New York-Grand Central Terminal	Metro-North	—	619	619	637	637
Hoboken Terminal	NJ TRANSIT	—	501	501	122	122
Hoboken Terminal (PATH)	PANYNJ	—	316	340	141	141
World Trade Center Station	PANYNJ	—	264	285	157	210
Times Sq-42 St/42 St-Port Authority Bus Terminal	NYCT	Nos. 1, 2, 3, 7, and A, C, E, N, Q, R, S, W	790	851	474	484
Grand Central-42 St	NYCT	Nos. 4, 5, 6, 7, and S	761	820	475	512
14 St-Union Square	NYCT	Nos. 4, 5, 6, and L, N, Q, R, W	585	630	450	485
Fulton St	NYCT	Nos. 2, 3, 4, 5, and A, C, J, Z	495	533	333	358
Lexington Av/59 St	NYCT	Nos. 4, 5, 6, and N, R, W	455	490	373	401
Lexington Av/53 St and 51 St	NYCT	No. 6, and E, M	395	425	285	307
42 St-Bryant Park-5 Av	NYCT	No. 7, and B, D, F, M	342	369	218	235
Broadway-Lafayette St and Bleecker St	NYCT	No. 6, and B, D, F, M	341	368	246	265
Court Square	NYCT	No. 7, and E, G, M	332	354	337	363
59 St-Columbus Circle	NYCT	No. 1, and A, B, C, D	326	351	222	239
Atlantic Av-Barclays Center	NYCT	Nos. 2, 3, 4, 5, and B, Q, D, N, R	313	338	280	301
34 St-Herald Sq	NYCT	B, D, F, M, N, Q, R, W	319	344	205	221
14 St (Sixth Av/Seventh Av)	NYCT	Nos. 1, 2, 3, and F, M, L	268	288	234	252
Flushing-Main St	NYCT	7	261	281	288	310
Broadway Junction	NYCT	Nos. 1, 2, 3, and F, M, L	245	264	222	239
Canal St	NYCT	No. 6, and N, Q, R, W, J	230	247	170	183
168 St-Washington Heights	NYCT	No. 1, and A, C	204	219	162	174

Source: WSP, Best Practice Model.

Note: All stations with free connections have aggregated volumes. Peak-hour incremental change was calculated as an average 28 percent peak-hour to peak-period ratio in the PM for NYCT subways, PATH trains, and buses; 43 percent peak-hour to peak-period ratio for Metro-North and NJ TRANSIT; and 41 percent peak-hour to peak-period ratio for LIRR. Net ons/offs include subway-to-bus, subway-to-subway, and bus-to-subway transfers and is not a direct calculation of Tolling Scenario E minus No Action Alternative incremental trips. Tolling Scenario C was used for analysis at Hoboken Terminal.

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Table 4C.4 - Modified Final EA Table 4C-34. NYCT Station Elements Where Adverse Effects and Accompanying Project Improvements Have Been Identified (CBD Tolling Alternative, 2023 AM Peak Hour) – with Adopted Toll Structure and Mitigation Added

STATION	ELEMENT	NO ACTION ALTERNATIVE			FINAL EA (SCENARIO E)			ADOPTED TOLL STRUCTURE			WITH MITIGATION: FINAL EA (SCENARIO E)		WITH MITIGATION: ADOPTED TOLL STRUCTURE		IDENTIFIED MITIGATION
		AM Peak-Hour Volume	V/C Ratio	Level of Service	AM Peak-Hour Volume	V/C Ratio	Level of Service	AM Peak-Hour Volume	V/C Ratio	Level of Service	V/C Ratio	Level of Service	V/C Ratio	Level of Service	
Flushing – Main Street	**Escalator E456**: Street escalator at north side of Roosevelt Avenue between Main Street and Union Street	2,984	1.18	D	3,040	1.21	D	3,045	1.21	D	1.08	D	1.08	D	Increase escalator speed to 120 feet per minute.
Court Square	**Stair P2/P4:** Stair between paid zone and Manhattan-bound No. 7 train	3,825	1.84	F	3,955	1.90	F	3,947	1.90	F	1.56	E	1.56	E	Construct new stair from the northern end of No. 7 platform to the street.

Note: Highlighted columns show with-mitigation service levels, these were not included in Table 4C-35 in the Final EA

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Table 4C.5 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
4C – Transportation: Transit	Transit Systems	The Project would generate a dedicated revenue source for investment in the transit system. Transit ridership would increase by 1 to 2 percent systemwide for travel to and from the Manhattan CBD, because some people would shift to transit rather than driving. Increases in transit ridership would not result in adverse effects on line-haul capacity on any transit routes.	New York City Transit	% Increase or decrease in total AM peak period boardings systemwide	1.5%	1.6%	1.7%	1.9%	2.0%	1.9%	1.8%	No	**No mitigation needed.** No adverse effects	1.7%	No	**No mitigation needed.** No adverse effects
			PATH		0.8%	0.7%	1.4%	1.6%	2.0%	1.8%	1.6%			1.3%		
			Long Island Rail Road		0.6%	0.9%	1.1%	1.5%	2.0%	1.3%	1.0%			1.0%		
			Metro-North Railroad		0.6%	0.8%	1.3%	1.7%	1.4%	1.9%	0.8%			1.4%		
			NJ TRANSIT commuter rail		0.3%	0.5%	1.0%	1.5%	2.3%	1.7%	1.0%			0.9%		
			MTA/NYCT Buses		1.3%	1.3%	1.5%	1.5%	1.6%	1.6%	1.2%			1.3%		
			NJ TRANSIT Bus		0.7%	0.5%	0.6%	0.7%	1.1%	1.0%	0.7%			0.9%		
			Other buses (suburban and private operators)		0.2%	0.0%	0.9%	0.7%	0.5%	0.5%	0.1%			0.2%		
			Ferries (Staten Island Ferry, NYC Ferry, NY Waterway, Seastreak)		2.5%	2.7%	3.1%	3.2%	3.1%	3.6%	2.7%			2.9%		
			Roosevelt Island Tram		1.8%	1.7%	2.0%	2.2%	2.6%	2.5%	1.7%			2.9%		
	Bus System Effects	Decreases in traffic volumes within the Manhattan CBD and near the 60th Street boundary of the Manhattan CBD would reduce the roadway congestion that adversely affects bus operations, facilitating more reliable, faster bus trips.	Manhattan local buses	% Increase or decrease at maximum passenger load point	0.5%	0.5%	0.7%	1.1%	1.2%	0.9%	0.7%	No	**No mitigation needed.** No adverse effects	0.5%	No	**No mitigation needed.** No adverse effects
			Bronx express buses		-1.6%	2.0%	2.2%	-0.5%	2.0%	1.5%	-2.5%			0.6%		
			Queens local and express buses (via Ed Koch Queensboro Bridge)		2.2%	2.0%	2.3%	2.3%	2.5%	2.8%	2.0%			2.2%		
			Queens express buses (via Queens-Midtown Tunnel)		0.3%	0.2%	0.4%	0.8%	1.1%	0.8%	0.6%			0.5%		
			Brooklyn local and express buses		0.8%	1.0%	0.6%	0.7%	0.7%	0.8%	2.6%			0.5%		
			Staten Island express routes (via Brooklyn)		4.0%	4.5%	4.4%	3.8%	3.9%	3.7%	3.5%			3.9%		
			Staten Island express routes (via NJ)		1.0%	1.9%	2.3%	2.8%	1.8%	1.8%	2.4%			1.3%		
			NJ/West of Hudson buses (via Holland Tunnel)		-1.4%	-0.9%	-0.3%	1.4%	-0.9%	-0.6%	-1.4%			1.9%*		
			NJ/West of Hudson buses (via Lincoln Tunnel)		0.4%	0.6%	0.4%	0.6%	1.5%	1.1%	0.6%			0.8%		

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Table 4C.5 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
4C – Transportation: Transit (Cont'd)	Transit Elements	Increased ridership would affect passenger flows with the potential for adverse effects at certain vertical circulation elements (i.e., stairs and escalators) in five transit stations: ▪ Hoboken Terminal, Hoboken, NJ PATH station ▪ Times Sq-42 St/42 St-Port Authority Bus Terminal subway station in the Manhattan CBD (N, Q, R, W, and S; Nos. 1, 2, 3, and 7; and A, C, E lines) ▪ Flushing-Main St subway station, Queens (No. 7 line) ▪ 14th Street-Union Square subway station in the Manhattan CBD (Nos. 4, 5, and 6; and L, N, Q, R, W lines) ▪ Court Square subway station, Queens (No. 7 and E, G, M lines)	Hoboken Terminal–PATH station (NJ) Stair 01/02	Net passenger increases or at stair in the peak hour	45	72	122	164	240	205	139	Yes	**Mitigation needed for Tolling Scenarios E and F.** TBTA will coordinate with NJ TRANSIT and PANYNJ to monitor pedestrian volumes on Stair 01/02 one month prior to commencing tolling operations to establish a baseline, and two months after Project operations begin. If a comparison of Stair 01/02 passenger volumes before and after implementation shows an incremental change that is greater than or equal to 205, then TBTA will coordinate with NJ TRANSIT and PANYNJ to implement improved signage and wayfinding to divert some people from Stair 01/02, and supplemental personnel if needed.	140	No	**No mitigation needed.** TBTA is maintaining its commitment to implement the mitigation measures identified in the Final EA as an enhancement
			42 St-Times Square–subway station (Manhattan) Stair ML6/ML8 connecting mezzanine to uptown 1/2/3 lines subway platform	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	63%	59%	68%	82%	100%	82%	56%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, TBTA will coordinate with MTA NYCT to remove the center handrail and standardize the riser, so that the stair meets code without the hand rail. The threshold will be set to allow for sufficient time to implement the mitigation so that the adverse effect does not occur.	60%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA
			Flushing-Main St subway station (Queens)–Escalator E456 connecting street to mezzanine level	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	116%	91%	108%	116%	100%	133%	72%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, MTA NYCT will increase the speed from 100 feet per minute (fpm) to 120 fpm.	110%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA.
			Union Sq subway station (Manhattan)–Escalator E219 connecting the L subway line platform to the Nos. 4/5/6 line mezzanine	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	63%	82%	87%	102%	100%	95%	61%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, MTA NYCT will increase the escalator speed from 100 fpm to 120 fpm.	77%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA.
			Court Sq subway station (Queens)–Stair P2/P4 to Manhattan-bound No. 7 line	Relative increase or decrease in passenger volumes at station OVERALL as compared to Tolling Scenario E (not only at the affected stair or location) in the peak hour, peak period	98%	90%	102%	104%	100%	117%	97%	Yes	**Mitigation needed.** TBTA will coordinate with MTA NYCT to implement a monitoring plan for this location. The plan will identify a baseline, specific timing, and a threshold for additional action. If that threshold is reached, TBTA will coordinate with MTA NYCT to construct a new stair from the northern end of the No. 7 platform to the street. The threshold will be set to allow for sufficient time to implement the mitigation so that the adverse effect does not occur.	102%	Yes	**No additional mitigation needed.** TBTA will coordinate with MTA NYCT to implement the mitigation commitments of the Final EA

4D Transportation – Parking

Subchapter 4D of the Final EA presented the assessment of the CBD Tolling Alternative's potential effect on parking conditions, including curbside parking (on-street parking) and parking lots and garages (off-street parking) serving transit stations and transit hubs where potential increases in transit ridership could increase the demand for parking. This section reevaluates those effects for the adopted toll structure.

METHODOLOGY

Final EA Methodology

The methodology used to evaluate the Project's effect on parking conditions is described in the Final EA in Subchapter 4D, Section 4D.2, "Methodology." As detailed there, the methodology included the following:

1. Used BPM output to identify groupings of transit stations and hubs where the CBD Tolling Alternative (any tolling scenario) would result in more than 50 new vehicles in the peak hour.
2. For groupings of transit stations and hubs from Step 1, calculated the average increase per station within the grouping to identify individual stations where the CBD Tolling Alternative would result in more than 50 new vehicles per hour, since that level of new vehicle trips could be large enough to result in a corresponding increase in demand for parking spaces nearby.
3. For stations and hubs from Step 2, conducted detailed analysis to identify effects (this was not needed for any location).
4. For stations and hubs from Step 3, identified mitigation for any potential adverse effects (this was not needed for any location).

Reevaluation Methodology

The same methodology used in the Final EA was followed for the reevaluation. As with the Final EA, the later steps of detailed analysis and identifying mitigation were not needed for any location because no locations were identified where demand would increase by 50 or more vehicles as the result of the adopted tolling structure.

ANALYSIS AND FINDINGS

The analysis in the Final EA concluded that all tolling scenarios would decrease vehicle trips to the Manhattan CBD with a corresponding increase in transit trips. With the adopted toll structure, the number of daily Manhattan CBD-related journeys by transit mode is projected to increase by 1.7 percent, within the range studied in the Final EA (as shown in Table 4A-10 on page 4A-17, increases would range from 1.2 percent to 2.5 percent for the tolling scenarios evaluated). **Table 4D.1** presents the CBD-related transit journeys for the Final EA tolling scenarios in comparison to the adopted toll structure.

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Table 4D.1 - Modified Final EA Table 4A-10. Daily Manhattan CBD-Related Transit Journeys (compared to No Action Alternative) by Tolling Scenario (2023) – With the Adopted Toll Structure Added

NO ACTION	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
1,833,770	1,856,016	1,856,487	1,864,633	1,874,509	1,878,700	1,872,355	1,860,737	1,864,947
Difference	22,246	22,717	30,863	40,739	44,930	38,585	26,967	31,177
Percentage	1.2%	1.2%	1.7%	2.2%	2.5%	2.1%	1.5%	1.7%

The predicted increase in transit trips to the Manhattan CBD would result in an increase in vehicle trips to commuter rail and park-and-ride facilities, with smaller increases at other transit stations. The analysis in the Final EA concluded that the increase in commuters at individual stations or park-and-ride facilities would be distributed throughout the region, and no individual stations would have increases in vehicle trips of 50 or more vehicles in the peak hour for any tolling scenario. Therefore, no adverse effect on parking conditions would occur at locations in the regional study area. While additional parking demand may occur at transit facilities that have no available capacity, this level of increase would not constitute an adverse effect.

BPM results for the adopted toll structure indicate that, as with the Final EA tolling scenarios, the predicted increase in vehicle trips to commuter rail stations, park-and-ride facilities, and other transit stations would be distributed throughout the region and no individual stations would have 50 or more new peak-hour vehicle trips. **Table 4D.2** provides information on the station groupings that would have more than 50 new peak-hour vehicle trips, and the resulting peak-hour trips per station within each grouping. Consequently, the conclusions of the Final EA related to parking at transit facilities outside the Manhattan CBD remain valid.

Table 4D.2 - Groupings of Transit Stations with More than 50 New Peak-Period Vehicle Trips, Final EA and Adopted Toll Structure

STATION GROUPING / STATIONS IN GROUP	FINAL EA (TOLLING SCENARIO E)		ADOPTED TOLL STRUCTURE	
	New Peak Hour Trips per Group	New Peak Hour Trips per Station	New Peak Hour Trips per Group	New Peak Hour Trips per Station
Commuter Rail Stations				
LIRR Massapequa Park–Babylon Group (5 stations)	141	28	—	—
LIRR Carle Place–Hicksville Group (3 stations)	96	32	—	—
LIRR Merrick–Massapequa Park Group (5 stations)	101	20	—	—
NJT Port Jervis Group (8 stations)	147	18	—	—
NJT Northeast Corridor Central Group (5 stations)	108	22	—	—
MNR Upper Hudson/Dutchess Group (3 stations)	82	27	—	—
MNR Inner Harlem Lower Group (5 stations)	125	25	—	—
MNR Inner New Haven Line Group (5 stations)	—	—	75	15
Subway Stations				
Queens Blvd, Queens E/F Line Group (3 stations)	83	28	60	20
Court Sq, Queens 7/E/G/M Line Group (3 stations)	82	27	81	27
Fourth Ave, Brooklyn D/N/R Line Group (6 stations)	83	14	94	16

Note: LIRR = Long Island Rail Road; MNR = Metro-North Railroad, NJT = NJ TRANSIT

The Final EA also noted that the BPM did not predict increases in vehicle traffic in neighborhoods close to, but outside, the Manhattan CBD as might occur if drivers sought parking there to avoid the toll, but that this behavior might occur on a short-lived basis as part of the adjustment process. If parking demand exceeds supply in the areas close to the CBD boundary, this would not result in adverse effects using the City Environmental Quality Review (CEQR) methodology for parking analyses, which does not consider parking shortfalls in those areas to be adverse effects. The same conclusions remain true for the adopted toll structure.

The MTA Reform and Traffic Mobility Act states that the City of New York must monitor the effects of the Project on parking within and around the Manhattan CBD, and a report must be completed 18 months after the Project commences. A parking study is being led by NYCDOT and work collecting pre-implementation baseline data is under way.

Table 4D.3 presents information from the Final EA Table ES-5 summarizing the conclusions related to parking conditions, now modified to include the adopted toll structure

CONCLUSION

The reevaluation used data from the BPM for the adopted toll structure to assess the potential for effects on parking conditions, and compared the results to the effects presented in the Final EA. BPM results for the adopted toll structure indicate that the predicted increase in vehicle trips to commuter rail stations, park-and-ride facilities, and other transit stations would generally be smaller than evaluated in the Final EA, and the demand for parking would also be lower. Consequently, the analysis demonstrates that the effects of the adopted toll structure would be within the range evaluated in the Final EA and the Final EA remains valid. No adverse effects would occur and no mitigation would be required.

Table 4D.3 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
4D – Transportation: Parking	Parking Conditions	All tolling scenarios would result in a reduction in parking demand within the Manhattan CBD of a similar magnitude to the reduction in auto trips into the Manhattan CBD. With a shift from driving to transit, there would be increased parking demand at subway and commuter rail stations and park-and-ride facilities outside the Manhattan CBD.	Manhattan CBD	Narrative	Reduction in parking demand due to reduction in auto trips to CBD							No	**No mitigation needed.** Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects
			Transit Facilities	Narrative	Small changes in parking demand at transit facilities, corresponding to increased commuter rail and subway ridership							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects

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4E Transportation – Pedestrians and Bicycles

Subchapter 4E of the Final EA presented the assessment of the CBD Tolling Alternative's potential effects on pedestrian circulation; bicycle routes and bicycle infrastructure; and vehicular, pedestrian, and bicycle safety. This section reevaluates those topics for the adopted toll structure.

METHODOLOGY

Final EA Methodology

Subchapter 4E presented the methodologies used for analyses in Section 4E.2.1 (methodology for pedestrian circulation analysis), Section 4E.3.1 (for bicycle assessment), and Section 4E.4.1 (for vehicular, pedestrian, and bicycle safety). As described there, those methodologies included the following steps.

Pedestrians

1. Selected for analysis the tolling scenario that would result in the largest number of new transit riders and therefore the largest increase in pedestrian volumes on sidewalks, street corners, and crosswalks outside transit hubs. Tolling Scenario E was used for the analysis of pedestrian conditions.
2. Used BPM output to identify transit stations and hubs where the CBD Tolling Alternative (Tolling Scenario E, the scenario with the largest increase in pedestrian volumes) would result in more than 200 new pedestrians in the peak hour.
3. For stations and hubs from Step2, identified those with external pedestrian elements (sidewalks, crosswalks, or corners) where the CBD Tolling Alternative (any tolling scenario) would result in more than 200 new pedestrians per hour.
4. For stations from Step3, conducted a detailed (quantified) analysis of capacity vs. demand to identify potential effects on pedestrian flow.
5. For any adverse effects identified in Step4, mitigation was developed.

Bicycles

1. Based on mode share data from New York Metropolitan Transportation Council, the analysis assumed that 2 percent of pedestrian trips at transit hubs in Manhattan may be bicycle trips.
2. With that assumption, bicycle demand vs. capacity at transit hubs was qualitatively assessed.

Safety

1. For the stations and hubs where detailed pedestrian analyses were conducted, NYCDOT accident data were reviewed to identify potential for safety issues related to changes in pedestrian volumes with the CBD Tolling Alternative.
2. For the stations where detailed pedestrian analyses were conducted, analysis locations were assessed for compliance with the Americans with Disabilities Act (ADA).

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Reevaluation Methodology

Pedestrians

1. Same as in the Final EA; used BPM output to identify transit stations and hubs where the adopted toll structure would result in more than 200 new pedestrians in the peak hour.
2. Same as in the Final EA; for stations and hubs from Step 1, identified those with external pedestrian elements (sidewalks, crosswalks, or corners) where the adopted toll structure would result in more than 200 new pedestrians per hour. For those locations, identified locations where the number of incremental trips with the adopted toll structure is greater than the incremental trips associated with Tolling Scenario E.
3. If a location met the Step 2 threshold for increased pedestrians, but the increase was less than that in Tolling Scenario E, where no adverse effects were found after detailed analysis in the Final EA, then no further detailed analysis was necessary. For other locations that met the Step 2 threshold, conducted a detailed (quantified) analysis of capacity vs. demand to identify potential effects on pedestrian flow.
4. For any adverse effects identified in Step 3, reviewed adequacy of Final EA mitigation (this was not needed for any locations).

Bicycles and Safety

The Project Sponsors used the same methodologies used in the Final EA for the reevaluation.

ANALYSIS AND FINDINGS

Pedestrians

Both the Final EA Tolling Scenario E and the adopted toll structure would increase the total number of peak-hour transit trips throughout the region, but the increase would be lower with the adopted toll structure (1.4 percent overall) than with Final EA Tolling Scenario E (1.8 percent increase overall), as shown in Table 4E.1.

Table 4E.1 - Modified Final EA Table 4A-10. Daily Manhattan CBD-Related Transit Journeys (compared to No Action Alternative) by Tolling Scenario (2023) – With the Adopted Toll Structure Added

NO ACTION	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
1,833,770	1,856,016	1,856,487	1,864,633	1,874,509	1,878,700	1,872,355	1,860,737	1,864,947
Difference	22,246	22,717	30,863	40,739	44,930	38,585	26,967	31,177
Percentage	1.2%	1.2%	1.7%	2.2%	2.5%	2.1%	1.5%	1.7%

The Final EA concluded that at most transit stations throughout the region, the volume of pedestrian trips would be distributed among different station entrances and different locations around the station, and no adverse effects would occur to pedestrian conditions. The analysis identified 16 stations and station hubs where Tolling Scenario E would result in more than 200 new pedestrian trips in the peak hour, and of those,

two station hubs where there would be more than 200 new pedestrian trips at individual pedestrian elements outside the stations. For those two station hubs, a quantified analysis was performed:

- World Trade Center/Fulton Street (in the Manhattan CBD)
- Herald Square/Penn Station (in the Manhattan CBD)

The quantified analysis in the Final EA found that there would be no adverse effects at the World Trade Center/Fulton Street transit hub. The Final EA concluded that a potential adverse effect would occur at three pedestrian elements at the Herald Square/Penn Station transit hub—a sidewalk location and two crosswalks. The Final EA determined that these effects would be mitigated, if appropriate, through standard measures to widen the pedestrian space on sidewalks (by removing obstructions) and crosswalks (by widening the striped area). The Final EA described a monitoring plan with thresholds that would trigger NYCDOT implementing these actions to increase pedestrian space.

Based on updated BPM results for the adopted toll structure, the adopted toll structure would result in 200 new peak-hour pedestrian trips at 10 stations/station hubs (compared to 16 with Tolling Scenario E) and of those, it would result in more than 200 new peak-hour pedestrian trips at individual elements outside the station at one station hub, the Herald Square/Penn Station hub. **Table 4E.2** shows the results of the screening analysis for the Final EA (Tolling Scenario E) and the adopted toll structure.

Table 4E.2 – Modified Final EA Table 4E-1. Transit Station Pedestrian Trip Assessment (2023) – With Adopted Toll Structure Added

TRANSIT STATIONS WITH MORE THAN 200 NEW PEDESTRIANS PER HOUR		INDIVIDUAL PEDESTRIAN ELEMENT WITH MORE THAN 200 NEW PEDESTRIANS PER PEAK HOUR	
FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE	FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE
14 Street–Union Square, CBD (Nos. 4/5/6, and L/N/R/Q/W subway lines)	14 Street–Union Square, CBD (Nos. 4/5/6, and L/N/R/Q/W subway lines)	No	No
Herald Square/Penn Station New York, CBD, includes the following: ▪ 34 Street–Herald Square subway station (B/D/F/M/N/Q/R/W subway lines) ▪ 34 Street–Penn Station subway station (Nos. 1/2/3 subway lines) ▪ 34 Street–Penn Station subway station (A/C/E subway lines) ▪ 33rd Street Station (PATH) ▪ New York Pennsylvania Station (Amtrak, LIRR, NJ TRANSIT)	Herald Square/Penn Station New York, CBD, includes the following: ▪ 34 Street–Herald Square subway station (B/D/F/M/N/Q/R/W subway lines) ▪ 34 Street–Penn Station subway station (Nos. 1/2/3 subway lines) ▪ 34 Street–Penn Station subway station (A/C/E subway lines) ▪ 33rd Street Station (PATH) ▪ New York Pennsylvania Station (Amtrak, LIRR, NJ TRANSIT)	**Yes**	**Yes**
42 Street–Bryant Park, CBD (B/D/F/M subway lines and connection to Fifth Avenue [No. 7 subway line])	—	No	—
47-50 Streets–Rockefeller Center, Manhattan CBD (B/D/F/M subway lines)	47-50 Streets–Rockefeller Center, CBD (B/D/F/M subway lines)	No	No
Broadway–Lafayette Street, Manhattan CBD (B/D/F/M and No. 6 subway lines)	—	No	—
Canal Street, CBD (J/N/Q/R/W/Z and No. 6 subway lines)	—	No	—
Canal Street, CBD (A/C/E subway lines)	—	No	—
World Trade Center/Fulton Street, CBD, includes the following: ▪ Fulton Street subway stations (Nos. 2/3/4/5 and A/C/J/Z subway lines) ▪ World Trade Center Station (PATH) ▪ Cortlandt Street Station (R/W subway lines)	World Trade Center/Fulton Street, CBD, includes the following: ▪ Fulton Street subway stations (Nos. 2/3/4/5 and A/C/J/Z subway lines) ▪ World Trade Center Station (PATH) ▪ Cortlandt Street Station (R/W subway lines)	**Yes**	No
Flushing Main Street, Queens, NY (No. 7 subway line)	Flushing Main Street, Queens, NY (No. 7 subway line)	No	No
Atlantic Terminal, Brooklyn, NY, includes the following: ▪ Atlantic Avenue–Barclays Center subway station (Nos. 2/3/4/5 and B/D/N/Q/R/W subway lines) ▪ Atlantic Terminal (LIRR)	—	No	—

TRANSIT STATIONS WITH MORE THAN 200 NEW PEDESTRIANS PER HOUR		INDIVIDUAL PEDESTRIAN ELEMENT WITH MORE THAN 200 NEW PEDESTRIANS PER PEAK HOUR	
FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE	FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE
Grand Central Terminal, CBD, includes the following: ▪ 42 Street–Grand Central subway station (Nos. 4/5/6/7/S subway lines) ▪ Grand Central Terminal (Metro-North Railroad)	Grand Central Terminal, CBD, includes the following: ▪ 42 Street–Grand Central subway station (Nos. 4/5/6/7 and S subway lines) ▪ Grand Central Terminal (Metro-North Railroad)	No	No
Lexington Avenue/53 Street, Manhattan CBD (E/M subway lines and connection to 51 Street [No. 6 subway line])	Lexington Avenue/53 Street, CBD (E/M subway lines and connection to 51 Street [No. 6 subway line])	No	No
Second Avenue, CBD (F subway line)	—	No	—
Wall Street, CBD (Nos. 2/3 subway lines)	—	No	—
Secaucus, Hudson County, NJ (NJ TRANSIT)	Secaucus, Hudson County, NJ (NJ TRANSIT)	No	No
Hoboken Terminal, Hudson County, NJ (PATH/NJ TRANSIT)	Hoboken Terminal, Hudson County, NJ (PATH/NJ TRANSIT)	No	
—	Jackson Heights-Roosevelt Avenue, Queens, NY (E/F/M/R/No. 7 subway lines)	No	

Source: WSP, Best Practice Model.

With the adopted toll structure, at the transit hub where incremental peak-hour pedestrian volumes would exceed the screening threshold of 200 trips per hour, three pedestrian elements would exceed the 200-trip-per-hour threshold and therefore warranted additional analysis (see **Table 4E.3**). These were elements that also exceeded the screening threshold with Final EA Tolling Scenario E, but they were not the elements where the Final EA identified adverse effects. At these locations, where the adopted toll structure would result in more than 200 new pedestrians in the peak hour, incremental pedestrian volumes resulting from the adopted toll structure would be smaller than the incremental pedestrian volumes from Tolling Scenario E. Since the Final EA did not find adverse effects at these locations from Tolling Scenario E, adverse effects also would not occur from the adopted toll structure.

The adopted toll structure would not result in more than 200 new pedestrians in the peak hour at the locations where the Final EA identified adverse effects, and therefore the adverse effect would no longer occur there with the adopted toll structure. While mitigation at Herald Square is no longer needed with the adopted toll structure, the Project Sponsors will implement the mitigation described in the Final EA and FONSI as an enhancement.

Table 4E.4 summarizes the pedestrian effects of the adopted toll structure in comparison to the effects identified in the Final EA.

Table 4E.3 – Modified Final EA Table 4E.2-14 (from Appendix 4E). Pedestrian Level 2 Screening Analysis Results – Herald Square/Penn Station Study Area (2023) – With Adopted Toll Structure and Addition of Impact Results

PEDESTRIAN ELEMENTS	FINAL EA (SCENARIO E)					ADOPTED TOLL STRUCTURE				
	INCREMENTAL PEDESTRIAN TRIPS			ANALYSIS LOCATION	ADVERSE EFFECT	INCREMENTAL PEDESTRIAN TRIPS			ANALYSIS LOCATION	ADVERSE EFFECT
	AM	Midday	PM			AM	Midday	PM		
Eighth Ave and 34th St										
North sidewalk along 34th St between Seventh Ave and Eighth Ave	319	64	193	✓	No	163	32	102		No
South sidewalk along 34th St between Seventh Ave and Eighth Ave	62	30	173		No	*	*	*		No
West sidewalk along Eighth Ave between 34th St and 35th St	**221**	53	**204**	✓	**Yes: AM, PM**	114	27	104		No
Northeast corner	319	65	193	✓	No	163	33	102		No
Southeast corner	62	30	173		No	*	*	*		
Southwest corner	64	44	284	✓	No	37	22	141		No
Northwest corner	261	63	242	✓	No	135	32	125		No
North crosswalk	259	49	131	✓	No	132	25	70		No
South crosswalk	62	30	173		No	*	*	*		No
Eighth Ave and 31st St										
West sidewalk along Eighth Ave between 31st St and 32nd St	192	46	179		No	*	*	*		No
Southwest corner	172	42	159		No	*	*	*		No
Northwest corner	200	48	188		No	103	25	98		No
West crosswalk	160	38	146		No	*	*	*		No
Seventh Ave and 34th St										
East sidewalk along Seventh Ave between 34th St and 35th St	59	21	105		No	*	*	*		No
North sidewalk along 34th St between Seventh Ave and Broadway	500	128	532	✓	No	258	67	275	✓	No
Northeast corner	131	35	143		No	*	*	*		No
Northwest corner	104	22	71		No	*	*	*		No
Seventh Ave and 32nd St										
North sidewalk along 32nd St between Sixth Ave and Seventh Ave	399	82	262	✓	No	201	42	137	✓	No
West sidewalk along Seventh Ave between 31st St and 32nd St	34	22	144		No	*	*	*		No
Northeast corner	252	40	70	✓	No	127	20	38		No
North crosswalk	**221**	36	69	✓	**Yes: AM**	111	18	37		No

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PEDESTRIAN ELEMENTS	FINAL EA (SCENARIO E)					ADOPTED TOLL STRUCTURE				
	INCREMENTAL PEDESTRIAN TRIPS			ANALYSIS LOCATION	ADVERSE EFFECT	INCREMENTAL PEDESTRIAN TRIPS			ANALYSIS LOCATION	ADVERSE EFFECT
	AM	Midday	PM			AM	Midday	PM		
Broadway and 34th St										
North sidewalk along 34th St between Seventh Ave and Broadway	460	121	518	✓	No	238	64	269	✓	No
Sixth Avenue and 34th Street										
East sidewalk along Sixth Ave between 34th St and 35th St	131	31	118		No	*	*	*		No
North sidewalk along 34th St between Fifth Ave and Sixth Ave	241	57	220	✓	No	125	29	113		No
South sidewalk along 34th St between Fifth Ave and Sixth Ave	100	18	43		No	*	*	*		No
Northeast corner	313	72	268	✓	No	162	37	137		No
North crosswalk	**265**	65	**259**	✓	**Yes: AM, PM**	136	33	132		No

Notes: ✓ denotes pedestrian elements selected for detailed analysis (AM/PM only).
* Pedestrian elements with fewer than 100 project-generated pedestrian trips in a peak hour are not presented in this table.

Table 4E.4 - Comparison of Pedestrian Effects, Final EA and Adopted Toll Structure

ANALYSIS STEP	FINAL EA (SCENARIO E)	ADOPTED TOLL STRUCTURE
1. Transit stations / hubs with more than 200 new pedestrians in the peak hour	**16 stations/hubs**	**10 stations/hubs**
2. Transit stations / hubs with individual pedestrian elements that have more than 200 new pedestrians in the peak hour	**2 stations/hubs** Herald Square/Penn Station 14 elements would exceed: 6 sidewalks 5 corner reservoirs 3 crosswalks World Trade Center/Fulton St 2 elements would exceed: 1 sidewalk 1 corner reservoir	**1 station/hub** Herald Square/Penn Station 3 elements would exceed: 3 sidewalks
3. For intersections identified in Step 2, detailed level-of-service analysis to identify adverse effects (if needed after comparison to Tolling Scenario E)	**Adverse effects at 1 station/hub** Herald Square/Penn Station Of the 14 elements analyzed, 3 potential adverse effects: 1 sidewalk 2 crosswalks	**No adverse effects** The 3 elements that had potential adverse effects under Tolling Scenario E were not flagged in Step 2 for the adopted toll structure. For the adopted toll structure, the increase in pedestrians at each element that were flagged in Step 2 was less than the increment for Tolling Scenario E, and no adverse effects were found for Tolling Scenario E at those locations.
4. For adverse effects, identification of mitigation measures	**Mitigation needed** – monitoring plan resolved adverse effects at Herald Square/Penn Station	No mitigation needed

Bicycles

The Final EA concluded that the CBD Tolling Alternative would result in small increases in bicycle trips near transit hubs where the highest increases in pedestrian trip share would occur, and some shifts from automobiles to bicycles. No adverse effects on bicycle conditions would occur. With the adopted toll structure, pedestrian volumes, and hence estimated bicycle volumes, would be lower than predicted in the Final EA, and the conclusions of the Final EA remain valid.

Safety

The Final EA found that the CBD Tolling Alternative would result in reduced vehicle volumes in the Manhattan CBD, which would result in an overall benefit to safety. No substantial increases in pedestrian volumes or safety concerns at transit stations would occur. None of the curb ramps at locations analyzed in detail in the Final EA met ADA compliance when the analysis was prepared, but NYCDOT has an ongoing Pedestrian Ramp Program dedicated to upgrading and installing pedestrian ramps throughout New York City. With the adopted toll structure, pedestrian volumes would be lower than predicted in the Final EA and the conclusions of the Final EA remain valid.

Table 4E.5 presents information from the Final EA Table ES-5 summarizing the conclusions related to pedestrians and bicycles, now modified to include the adopted toll structure.

CONCLUSION

The analysis conducted for the reevaluation considered the effects of the adopted toll structure on pedestrian and bicycle conditions using the same methodology as used for the Final EA. The analysis concluded that both the Project as evaluated in the Final EA (Tolling Scenario E) and the adopted toll structure would increase the number of peak-hour transit trips throughout the region, which would also result in an increase in pedestrian trips near transit stations, but the increase would be lower with the adopted toll structure (1.4 percent overall) than with Final EA Tolling Scenario E While the Final EA predicted an adverse effect on pedestrian conditions at one sidewalk and two crosswalks near the Herald Square/Penn Station transit hub within the Manhattan CBD, this adverse effect would no longer occur with the adopted toll structure, and mitigation would no longer be required. Incremental pedestrian volumes around the Herald Square/Penn Station transit hub would be approximately 50 percent lower with the adopted toll structure than predicted in the Final EA. In addition, the adopted toll schedule would not result in adverse effects on pedestrian conditions at other locations. Therefore, the conclusions of the Final EA remain valid. Although the mitigation measures described in the Final EA and FONSI would no longer be needed at Herald Square/Penn Station, the Project Sponsors would implement the commitments related to pedestrian conditions described in the Final EA and FONSI as an enhancement.

Table 4E.5 – Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
4E – Transportation: Pedestrians and Bicycles	Pedestrian Circulation	Increased pedestrian activity on sidewalks outside transit hubs because of increased transit use. At all but one location in the Manhattan CBD (Herald Square/Penn Station), the increase in transit riders would not generate enough new pedestrians to adversely affect pedestrian circulation in the station area. Outside the Manhattan CBD, transit usage at individual stations would not increase enough to adversely affect pedestrian conditions on nearby sidewalks, crosswalks, or corners.	Herald Square/Penn Station NY	Sidewalks, corners, and crosswalks with pedestrian volumes above threshold in AM / PM peak periods	Adverse effects on pedestrian circulation at one sidewalk segment and two crosswalks							Yes	**Mitigation needed.** The Project Sponsors will implement a monitoring plan at this location. The plan will include a baseline, specific timing, and a threshold for additional action. If that threshold is reached, NYCDOT will increase pedestrian space on sidewalks and crosswalks via physical widening and/or removing or relocating obstructions.	Pedestrian volumes at key transit stations/hubs would be similar to and those predicted in Final EA. Adverse effects are no longer predicted at Herald Square.	No	**Mitigation is no longer needed.** The Project Sponsors will implement the mitigation commitment described in the Fina EA as an enhancement
	Bicycles	Small increases in bicycle trips near transit hubs and as a travel mode	Manhattan CBD	Narrative	Small increases in bicycle trips near transit hubs with highest increases in pedestrian trip share							No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects
			Outside Manhattan CBD	Narrative	Some shifts from automobile to bicycles							No	**No mitigation needed**. No adverse effects		No	**No mitigation needed**. No adverse effects
	Safety	No adverse effects	Overall	Narrative	No substantial increases in pedestrian volumes or increased safety concerns, including at existing identified high-crash locations. Overall, with fewer vehicular trips entering and exiting the Manhattan CBD, the CBD Tolling Alternative could result in reduced traffic volumes at these locations. This would help to reduce vehicle-vehicle and vehicle-pedestrian conflicts, leading to an overall benefit to safety.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects

5 Social Conditions: Population Characteristics and Community Cohesion (EA Subchapter 5A), Neighborhood Character (EA Subchapter 5B), and Public Policy (EA Subchapter 5C)

Chapter 5 of the Final EA encompassed three subchapters (Subchapters 5A, 5B, and 5C) that together presented an assessment of the potential effects of implementing the CBD Tolling Alternative on social conditions, which included population characteristics and community cohesion (incorporating consideration of community facilities and services, access to employment, and effects on vulnerable social groups), neighborhood character, and public policy. This section revaluates the effects of the adopted toll structure on those conditions.

METHODOLOGY

Final EA Methodology

The Final EA considered the range of issues that together constitute social conditions, consistent with FHWA guidance documents. Information on population characteristics was largely based on the U.S. Census Bureau's 2015–2019 American Community Survey (ACS) 5-Year Estimates. BPM results were used to evaluate the Project's effects on those characteristics. The methodologies used are described in further detail in in the Final EA in Subchapter 5A, "Population Characteristics and Community Cohesion," Section 5A.2, "Methodology" starting on page 5A-1 and Subchapter 5B, "Neighborhood Character," Section 5B.2.1, "Methodology" starting on page 5B-1.

Reevaluation Methodology

The same methodology was used for reevaluation of the adopted toll structure. BPM output for the adopted toll structure was compared to the results evaluated in the Final EA to determine potential changes in conclusions related to social conditions.

ANALYSIS AND FINDINGS

The Final EA concluded that the congestion reductions resulting from the CBD Tolling Alternative would positively affect community connections and access to employment, education, healthcare, and recreation for residents. Based on an analysis of BPM results and other contextual information about the study area, it also concluded the following:

- The predicted changes in travel patterns would not adversely affect community cohesion. Changes to travel patterns, including increased use of transit, as a result of the Project would not adversely affect

community cohesion or make it more difficult for people to connect with others in their community, given the extensive transit network connecting to the Manhattan CBD and the small change in trips predicted.

- The Project would not result in the potential for indirect (involuntary) residential displacement. The Project would not result in the potential for indirect (involuntary) residential displacement. It would not result in substantial changes to market conditions so as to lead to changes in housing prices, given that real estate values in the Manhattan CBD are already high and the many factors that affect each household's decisions about where to live. In addition, low-income residents of the CBD would not experience a notable increase in the cost of living as a result of the Project because of the lack of change in housing costs, the many housing units protected through New York's rent-control, rent-stabilization, and other similar programs, the tax credit available to CBD residents with incomes of up to $60,000, and the conclusion that the cost of goods would not increase as a result of the Project.
- While the Project would increase costs for community service providers that operate vehicles into and out of the Manhattan CBD and for people who travel by vehicle to community facilities and services in the Manhattan CBD or from the CBD, given the wide range of travel options other than driving, the cost for users to drive to community facilities and services would not constitute an adverse effect on community facilities and services.
- The Project would not adversely affect vulnerable social groups, including elderly populations, persons with disabilities, transit-dependent populations, and non-driver populations. The specific costs incurred by each individual would vary depending on their particular circumstances. Many people, and particularly transit-dependent and non-driver populations, would benefit from travel-time and reliability improvements to bus service due to traffic reductions as well as from improvements to transit services.
- Access to employment in the Manhattan CBD would not be adversely affected. Most commuters to the CBD currently use transit. Those who drive despite the CBD toll would do so based on the need or convenience of driving and would benefit from the reduced congestion in the Manhattan CBD. There would be a negligible effect (less than 0.1 percent) on travel to employment within the Manhattan CBD and reverse-commuting from the CBD due to the wide range of transit options available and the small number of commuters who drive today.
- The changes in traffic patterns on local streets would not change the defining elements of the neighborhood character of the Manhattan CBD, which includes a variety of different land use types and neighborhoods. The predicted decrease in traffic volumes would result in beneficial effects to neighborhood character within the CBD.
- The Project would be consistent with regional transportation plans and other public policies.

With the adopted toll structure, automobile toll rates are within the range evaluated in the Final EA (see **Table 5.1**) and the effects on travel patterns (e.g., the change in total daily journeys to the Manhattan CBD and the change in non-work-related journeys such as travel for school, shopping, medical care, or entertainment purposes) would be within the range evaluated in the Final EA (see **Table 5.2**). The adopted toll structure includes a low-income discount plan, consistent with the commitments of the Final EA and FONSI. In addition, the adopted toll structure includes two plans that would enable individuals with

disabilities and organizations that transport such individuals to apply for an exemption from the CBD toll: an Individual Disability Exemption Plan and an Organization Disability Exemption Plan. Therefore the conclusions of the Final EA remain valid.

*Table 5.1 - Change in Total Daily Journeys (All Modes) To, Within, and From the Manhattan CBD – Final EA and Adopted Toll Structure**

PARAMETER	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
Auto toll rates – peak	$9	$10	$14	$19	$23	$23	$12	$15
Auto toll rates – off-peak	$7	$8	$11	$14	$17	$17	$9	$3.75
Auto toll rates – overnight	$5	$5	$7	$10	$12	$12	$7	
Low-income discount plan	25% discount**							50% discount**
Change in total daily journeys **to, within, and from** the Manhattan CBD	+305 (+0.01%)	+2.993 (+0.10%)	+3,147 (+0.11%)	-1,886 (-0.07%)	-660 (-0.02%)	+1,424 (+0.05%)	+1,141 (+0.04%)	+846 (+0.03%)

* See Final EA Table 5A-3, pg. 5A-23.

** The Final EA committed to a Low-Income Discount Plan with a 25% discount on the peak toll rate after the first 10 trips each month (resulting in a discounted base auto toll rate of $7 - $17). The adopted toll structure has a 50% discount on the peak toll rate after the first 10 trips each month (resulting in a discounted base auto toll rate of $7.50).

*Table 5.2 - Predicted Changes in Non-Work Journeys in Final EA and Adopted Toll Structure (2023)**

PARAMETER	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
Change in non-work-related journeys **to, within, and from** the Manhattan CBD vs. No Action Alternative	-803 (-0.2%)	+2,124 (+0.2%)	+364 (+0.04%)	-3,726 (-0.4%)	-2,660 (-0.3%)	+570 (+0.1%)	-368 (-0.04%)	+836 (+0.1%)

* See Final EA Table 5A-5, pg. 5A-25.

Table 5.3 presents information from the Final EA Table ES-5 summarizing the conclusions related to social conditions, now modified to include the adopted toll structure.

CONCLUSION

To consider the effect of the adopted toll structure on social conditions, the Project Sponsors reviewed the parameters of the toll structure and BPM results for the adopted toll structure in comparison to results evaluated in the Final EA with respect to factors that affect social conditions, such as travel patterns, work-related and non-work-related trips, and changes in traffic patterns that could affect localized neighborhood character. As presented earlier, the toll rates and other parameters fall within the range evaluated in the Final EA. In addition, BPM results for the adopted toll structure for factors affecting social conditions also fall within the range evaluated in the Final EA. Consequently, the conclusions of the Final EA remain valid. No new adverse effects would occur and no new mitigation would be required.

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Table 5.3 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
5A – Social Conditions: Population	Benefits	Benefits in and near the Manhattan CBD	28-county study area	Narrative	Benefits in and near the Manhattan CBD related to travel-time savings, improved travel-time reliability, reduced vehicle operating costs, improved safety, reduced air pollutant emissions, and predictable funding source for transit improvements. This would positively affect community connections and access to employment, education, healthcare, and recreation for residents.							No	**No mitigation needed.** Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects
	Community Cohesion	Changes to travel patterns, including increased use of transit, resulting from new toll	28-county study area	Narrative	Changes to travel patterns, including increased use of transit, as a result of the Project would not adversely affect community cohesion or make it more difficult for people to connect with others in their community, given the extensive transit network connecting to the Manhattan CBD and the small change in trips predicted.							No	**No mitigation needed.** No adverse effects (see "Environmental Justice" for mitigation related to increased costs for low-income drivers).	Same as Final EA	No	**No mitigation needed.** Beneficial effects
	Indirect Displacement	No notable changes in socioeconomic conditions or cost of living so as to induce potential involuntary displacement of residents	Manhattan CBD	Narrative	The Project would not result in the potential for indirect (involuntary) residential displacement. It would not result in substantial changes to market conditions so as to lead to changes in housing prices, given that real estate values in the Manhattan CBD are already high and the many factors that affect each household's decisions about where to live. In addition, low-income residents of the CBD would not experience a notable increase in the cost of living as a result of the Project because of the lack of change in housing costs, the many housing units protected through New York's rent-control, rent-stabilization, and other similar programs, the tax credit available to CBD residents with incomes of up to $60,000, and the conclusion that the cost of goods would not increase as a result of the Project (see "Economic Conditions").							No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects
	Community Facilities and Services	Increased cost for community facilities and service providers in the Manhattan CBD, their employees who drive, and clientele who drive from outside the CBD	Manhattan CBD	Narrative	The Project would increase costs for community service providers that operate vehicles into and out of the Manhattan CBD and for people who travel by vehicle to community facilities and services in the Manhattan CBD, as well as residents of the CBD and employees of community facilities who use vehicles to travel to community facilities outside the CBD. Given the wide range of travel options other than driving, the cost for users to drive to community facilities and services would not constitute an adverse effect on community facilities and services.							No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects
	Effects on Vulnerable Social Groups	Benefits to vulnerable social groups from new funding for MTA Capital Program	28-county study area	Narrative	The Project would benefit certain vulnerable social groups, including elderly populations, persons with disabilities, transit-dependent populations, and non-driver populations by creating a funding source for the MTA 2020–2024 Capital Program (and subsequent capital programs and by reducing congestion in the Manhattan CBD). Elderly individuals would benefit from the travel-time and reliability improvements to bus service with the CBD Tolling Alternative, as bus passengers tend to be older than riders on other forms of transit, such as the subway and, as described above, bus passengers in the Manhattan CBD would benefit from travel-time savings due to the decrease in congestion. People over the age of 65 with a qualifying disability receive a reduced fare on MTA subways and buses, and elderly individuals with a qualifying disability can also receive MTA's paratransit service, including taxis and FHVs operating on behalf of MTA to transport paratransit users. Elderly people with disabilities and low-income individuals who drive to the Manhattan CBD would be entitled to the same mitigation and enhancements proposed for low-income and disabled populations, in general. Other elderly individuals who drive to the Manhattan CBD would pay the toll.							No	**No mitigation needed**. No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects
	Access to Employment	Increased cost for small number of people who drive to work	28-county study area	Narrative	Decrease in work trips by driving modes to and within the Manhattan CBD, with an offsetting increase in transit ridership. Those who drive despite the CBD toll would do so based on the need or convenience of driving and would benefit from the reduced congestion in the Manhattan CBD. Negligible effect (less than 0.1%) on travel to employment within the Manhattan CBD and reverse-commuting from the CBD due to the wide range of transit options available and the small number of commuters who drive today.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed**. No adverse effects

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Table 5.3 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
5B – Social Conditions: Neighborhood Character	Neighborhood character	No notable change in neighborhood character	Manhattan CBD	Narrative	The changes in traffic patterns on local streets would not change the defining elements of the neighborhood character of the Manhattan CBD.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
			Area near 60th Street Manhattan CBD boundary	Narrative	Changes in parking demand near the 60th Street CBD boundary (including increases just north of 60th Street and decreases just to the south) would not create a climate of disinvestment that could lead to adverse effects on neighborhood character nor alter the defining elements of the neighborhood character of this area.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
5C – Social Conditions: Public Policy	Public policy	No effect	28-county study area	Narrative	The Project would be consistent with regional transportation plans and other public policies in place for the regional study area and the Manhattan CBD.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects

Draft, Privileged and Confidential – for discussion purposes only; data still being assessed.

6 Economic Conditions

Chapter 6 of the Final EA presented an assessment of the potential effects of implementing the CBD Tolling Alternative on economic conditions at both the regional and neighborhood level. This section revaluates the effects of the adopted toll structure on those conditions.

METHODOLOGY

Final EA Methodology

Chapter 6 of the Final EA detailed the methodology used for the assessment on economic conditions in Section 6.2, beginning on page 6-1. As presented there, that included the following:

1. Identified baseline conditions using data from the U.S. Census, U.S. Department of Labor, and other sources with information on economic activities in the CBD and the 28-county regional study area
2. Used BPM output related to the Final EA tolling scenarios to identify potential changes for all tolling scenarios related to:
    - Movement of workforce
    - Non-work-related trips, including tourism
    - Taxi and FHV industry
    - Movement of goods and services and related effects on small businesses
    - Neighborhood-level effects near the 60th Street CBD boundary

Reevaluation Methodology

1. Compared BPM output for the adopted toll structure to the results evaluated in the Final EA to determine potential changes in conclusions related to economic conditions, for the same topics evaluated in the Final EA

ANALYSIS AND FINDINGS

Movement of Workforce

The Final EA concluded that no adverse economic effects would occur to any particular industry or occupational category as a result of the Project. The Manhattan CBD is highly accessible by transit and the majority of people who work in the CBD use transit to travel to work. While certain industries and occupations in the CBD have higher rates of auto commuting, these businesses have a small number of employees overall.

With the adopted toll structure, automobile toll rates are within the range evaluated in the Final EA, and the effects on the workforce would therefore be consistent with the conclusions of the Final EA (see **Table 6.1** below). The adopted toll structure would result in a decrease in the share (percentage) of daily work-related trips made to the CBD; this decrease would fall within the range evaluated in the Final EA for the tolling scenarios, and the conclusions of the Final EA remain valid.

*Table 6.1 - Change in Daily Worker Journeys To, Within, and From the Manhattan CBD – Final EA and Adopted Toll Structure**

PARAMETER	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
Auto toll rates – peak	$9	$10	$14	$19	$23	$23	$12	$15
Auto toll rates – off-peak	$7	$8	$11	$14	$17	$17	$9	$3.75
Auto toll rates – overnight	$5	$5	$7	$10	$12	$12	$7	$3.75
Change in total daily worker journeys by auto **to and within** the Manhattan CBD vs. No Action Alternative	-12,552 (-4.6%)	-11,790 (-4.4%)	-17,271 (-6.4%)	-23,877 (-8.8%)	-27,221 (-10.1%)	-24,230 (-9.0%)	-13,264 (-4.9%)	-17,290 (-6.4%)
Change in total daily worker journeys by auto **from** the Manhattan CBD vs. No Action Alternative	-482 (-3.8%)	-328 (-2.6%)	-661 (-5.3%)	-961 (-7.7%)	-916 (-7.3%)	-621 (-5.0%)	-550 (-4.4%)	-420 (-3.4%)

* See Final EA Table 6-23, pg. 6-51.

Non-Work-Related Trips, Including Tourism

The tourism industry in the CBD is not dependent on travel by autos or taxis/FHVs; most visitors (96 percent) use transit, walking, or tour buses to reach the CBD. The Final EA evaluated the CBD Tolling Alternative's potential effects on non-work-related journeys to and within the Manhattan CBD, including trips made for shopping and tourism. All tolling scenarios would result in small changes in non-work-related journeys to and within CBD from the No Action Alternative.

The Final EA concluded that the tolling scenarios would not adversely affect tourism or other industries related to non-work-related trips. As shown in **Table 6.2**, the adopted toll structure would result in a small increase in non-work-related journeys (across all modes) to and within CBD that falls within the range evaluated in the Final EA, and the conclusions of the Final EA remain valid.

*Table 6.2 - Predicted Changes in Non-Work Journeys (2023), Final EA and Adopted Toll Structure**

PARAMETER	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
Change in Non-Work-Related Journeys To and Within CBD vs. No Action Alternative	-803 (-0.2%)	+2,124 (+0.2%)	+364 (+0.04%)	-3,726 (-0.4%)	-2,660 (-0.3%)	+570 (+0.1%)	-368 (-0.04%)	+836 (+0.1%)

* See Final EA Table 6-28, pg. 6-58

Taxi and FHV Industry

The Final EA assessed the effects of the CBD Tolling Alternative on the taxi and FHV industry. The tolling scenarios evaluated in the Final EA included a variety of tolling policies for taxis and FHVs, ranging from unlimited tolling for taxis each day to a complete exemption from paying the CBD toll. In all tolling scenarios, the base toll price for taxis and FHVs, if any, was the same as for automobiles.

The analysis in the Final EA showed that in all tolling scenarios, the VMT for taxis and FHVs with paying customers (i.e., excluding VMT without paying customers in the vehicle) would decrease regionwide, in New York City, and in Manhattan overall. The reductions would be greatest in New York City, ranging from 5 to 9 percent in tolling scenarios that do not include a cap or exemption for tolls on taxis and FHVs (Tolling Scenarios A, D, and G) and 1 to 5 percent in those that do have caps and/or exemptions (Tolling Scenarios B, C, E, and F). For tolling scenarios with no cap or exemption for tolls on taxis and FHVs, VMT reductions would be largest within the Manhattan CBD, which is the core service area for yellow taxis, as well as in Manhattan overall.

The Final EA concluded that tolling scenarios that would toll taxis and/or FHVs more than once a day would result in VMT reductions at a level that could adversely affect individual drivers (see discussion of environmental justice), but that the industry would remain viable overall. For the Final EA, the Project Sponsors committed to ensure that a toll structure with tolls of no more than once per day for taxis or FHVs is included in the final toll structure to avoid an adverse effect on taxi and FHV drivers from the Project.

The Final EA described that in terms of economic impacts on businesses and industries, the change in taxi and FHV operations and business practices without the new commitment, while adverse for taxi and FHV drivers, would not have resulted in an adverse economic impact on the industry overall.

With the adopted toll structure, the base toll for taxis would be $1.25 per trip with paying passengers for trips to, within, or from the Manhattan CBD; for FHVs, the base toll would be $2.50 per trip with paying passengers for trips to, within, or from the Manhattan CBD. This is equivalent to the auto peak rate in the adopted toll structure of $15, based on the average number of trips per taxi and per FHV to, from, and within the CBD each day. Thus, this rate is consistent with the Project Sponsors' commitment to incorporate a toll of no more than once per day for taxis and FHVs in the final toll structure, and falls within the range of daily peak toll rates evaluated in the Final EA and determined not to have an adverse effect on either drivers or the industry, which was from $9 to $23 in the different tolling scenarios (see **Table 6.3**).

As shown in **Table 6.4**, the resulting change in VMT for taxis and FHVs with paying passengers would also fall within the range evaluated in the Final EA and determined not to have an adverse effect. In the Final EA, Tolling Scenarios B, F, and Modified G limited tolls on taxis and FHVs to once per day, with peak toll rates for autos ranging from $10 to $23. The toll for taxis and FHVs in those scenarios would apply for trips entering the CBD. Those three tolling scenarios resulted in increases in taxi and FHV VMTs within the Manhattan CBD but decreases citywide and regionwide. The other tolling scenarios (A, C, D, E, and G) did not limit tolls for taxis and FHVs to once per day and resulted in decreases in taxi/FHV VMT within the CBD as well as citywide and throughout the region. The adopted toll structure would have a toll rate falling

between that of Tolling Scenarios Modified G and F, but would apply the charge to trips within or leaving the CBD as well as those entering. For this reason, the adopted toll structure is predicted to result in a very small decrease in VMT within the CBD (0.3 percent), falling between the increases shown in the Final EA for Tolling Scenarios B, F, and Modified G and the larger decreases shown for the other tolling scenarios. Within New York City as a whole (including the CBD), the adopted toll structure would have a lower reduction in passenger VMT (1.6 percent) than Modified Scenario G (1.7 percent). It would therefore better achieve the congestion reduction purpose of the Project with respect to taxis and FHVs within the CBD while maintaining a low reduction in VMT within New York City as a whole, comparable to Modified Tolling Scenario G.

Since the final adopted toll structure is consistent with the Project Sponsors' commitment related to charges for taxis and FHVs and would result in only a small reduction in taxi and FHV VMT within the Manhattan CBD, the conclusions of the Final EA remain valid.

For more information on the effects of the adopted toll structure on taxi and FHV drivers, see the discussion in the reevaluation of environmental justice.

Table 6.3 - Comparison of Toll Policy for Taxis and FHVs, Final EA and Adopted Toll Structure

<table>
<tr><th rowspan="2">TOLL POLICY</th><th colspan="8">FINAL EA TOLLING SCENARIOS</th><th rowspan="2">ADOPTED TOLL STRUCTURE</th></tr>
<tr><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th><th>Modified G</th></tr>
<tr><td>Taxi Toll Policy</td><td rowspan="2">All Entries</td><td rowspan="2">Once per Day</td><td>Exempt</td><td rowspan="2">All Entries</td><td>Exempt</td><td rowspan="2">Once per Day</td><td rowspan="2">All Entries</td><td rowspan="2">Once per Day</td><td>$1.25 per trip toll on trips to, within, or from the CBD*</td></tr>
<tr><td>FHV Toll Policy</td><td>Up to 3 Times Daily</td><td>Up to 3 Times Daily</td><td>$2.50 per trip toll on trips to, within, or from the CBD*</td></tr>
<tr><td>Peak Toll Rate</td><td>$9</td><td>$10</td><td>$14</td><td>$19</td><td>$23</td><td>$23</td><td>$12</td><td>$12</td><td>$15</td></tr>
</table>

Note: * The per-trip tolls for taxis and FHVs in the adopted toll structure would be equivalent to the auto peak rate of $15 (based on 2023 NYC Taxi and Limousine Commission data for average trips per vehicle per day: for taxis the average number of trips with passengers to/from/within the CBD is 12, and for FHVs it is 6).

*Table 6.4 - Predicted VMT Changes for Taxis/FHVs (vs. No Action) (2023), Final EA and Adopted Toll Structure**

LOCATION	FINAL EA TOLLING SCENARIOS								ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	Modified G	
Manhattan CBD	-21,498 (-6.6%)	+15,020 (+4.6%)	-11,371 (-3.5%)	-54,476 (-16.8%)	-25,621 (-7.9%)	+4,962 (+1.5%)	-27,757 (-8.6%)	+10,203 (+3.1%)	--904 (-0.3%)
New York City	-128,847 (-5.1%)	-29,731 (-1.2%)	-84,406 (-3.4%)	-219,068 (-8.8%)	-130,412 (-5.2%)	-25,521 (-1.0%)	-147,687 (-5.9%)	-43,481 (-1.7%)	-40,040 (-1.6%)
28-County Study Area	-126,993 (-2.9%)	-14,028 (-0.3%)	-73,413 (-1.7%)	-217,477 (-5.0%)	-116,065 (-2.7%)	-4,888 (-1.0%)	-137,815 (-3.2%)	-23,213 (-0.5%)	-30,963 (-0.7%)

* See Final EA Table 6-30, pg. 6-63, Modified G scenario discussed in Chapter 17 has been added

Movement of Goods and Services and Related Effects on Small Businesses

The Final EA included an assessment of the CBD Tolling Alternative's potential effects on movement of goods and services, including how the cost of the new toll might affect small businesses. While the new toll would increase the cost for some shippers, it would decrease it for others due to travel time savings, the potential for reduced costs associated with parking tickets, and other potential cost savings. Any cost increase would be distributed among multiple businesses because shippers typically serve multiple businesses on a journey. This is consistent with results observed in Singapore, London, and Stockholm.

The Final EA concluded that the Project would not result in adverse effects on business activity in the CBD, small businesses, or the cost of goods and services. As a Project enhancement, the Project Sponsors committed to establishing a Small Business Working Group. In addition, they committed to ensuring the overnight toll for trucks and other vehicles is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m., thus offering a lower-cost option for off-peak truck deliveries.

With the adopted toll structure, toll costs for trucks are within the range evaluated in the Final EA and the conclusions of the Final EA remain valid (see **Table 6.5**). The Project Sponsors commit to the enhancements described in the Final EA and FONSI. The Small Business Working Group held its first meeting on January 22, 2024. In addition, the overnight toll rates in the adopted toll structure were reduced beyond the commitment made in the Final EA for a longer time period (the adopted toll structure includes overnight period toll rates that are 75 percent lower than the respective peak toll rates from 9:00 p.m. to 5:00 a.m. on weekdays and 9:00 p.m. to 9:00 a.m. weekends).

Table 6.5 - Modified Final EA Table 6-31. Truck Treatment by Tolling Scenario – with the Adopted Toll Structure Added

PARAMETER	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
Potential Crossing Credits								
Credit Toward the CBD Toll for Tolls Paid at Tunnels to the CBD	No	No	Yes – Low	Yes – High	Yes – High	Yes – High	No	Yes – Low
Credit Toward the CBD Toll for Tolls Paid at Bridges to Manhattan	No	No	No	No	No	Yes – High	No	No
Potential Exemptions and Limits (Caps) on Number of Tolls per Day								
Small and large trucks	No cap	Twice per day	No cap	No cap	No cap	Once per day	No cap	No cap
Approximate Toll Rate (Small Truck / Large Truck) *								
Peak	$18 / $28	$20 / $30	$28 / $42	$38 / $57	$46 / $69	$65 / $82	$12 / $12	$24 / $36
Off Peak	$14 / $21	$15 / $23	$21 / $32	$29 / $43	$35 / $52	$49 / $62	$9 / $9	
Overnight	$9 / $14	$10 / $15	$14 / $21	$19 / $29	$23 / $35	$33 / $41	$7 / $7	$6 / $9

* Toll rates are using E-ZPass and are rounded. For all tolling scenarios, different rates would apply for vehicles not using E-ZPass.

Neighborhood-Level Effects Near the 60th Street CBD Boundary

The Final EA included an assessment of the potential reductions in parking demand to the area within the CBD but close to the boundary. The analysis considered whether changes in consumer demand could alter underlying real estate market forces at the neighborhood level, specifically focusing on off-street parking uses and demand. It concluded that reductions in the number of daily vehicle trips to the CBD would result in decreases in parking demand just south of the 60th Street CBD boundary that could jeopardize the viability of one or more parking facilities in that area. The potential closure of parking garages in that area would not create a climate of disinvestment that could lead to adverse effects on neighborhood character. With the adopted toll structure, the predicted reduction in the number of vehicles would be within the range evaluated in the Final EA (see **Table 6.6**), and the conclusions of the Final EA remain valid.

The MTA Reform and Traffic Mobility Act states that the City of New York must monitor the effects of the Project on parking within and around the Manhattan CBD, and a report must be completed 18 months after the Project commences. A parking study is being led by NYCDOT and work collecting pre-implementation baseline data is under way.

Table 6.7 presents information from the Final EA Table ES-5 summarizing the conclusions related to economic conditions, now modified to include the adopted toll structure.

Table 6.6 - Predicted Reductions in Daily Auto Journeys Between 55th and 60th Streets in the CBD (2023), Final EA and Adopted Toll Structure

REDUCTION	FINAL EA TOLLING SCENARIOS							ADOPTED TOLL STRUCTURE
	A	B	C	D	E	F	G	
Change in daily auto journeys to CBD vs. No Action Alternative*	-20,742 (-5%)	-16,173 (-4%)	-25,559 (-7%)	-38,744 (-10%)	-40,906 (-11%)	-31,784 (-8%)	-23,056 (-6%)	-25,297 (-7%)
Potential reduction in daily auto journeys with destinations in area generally between 55th and 60th Streets vs. No Action Alternative (4.5% of total)	-933 (-5%)	-728 (-4%)	-1,150 (-7%)	-1,743 (-10%)	-1,841 (-11%)	-1,430 (-8%)	-1,038 (-6%)	-1,138 (-7%)

* See Final EA Table 6-34, pg. 6-80.

CONCLUSION

To consider the effect of the adopted toll structure on economic conditions, the Project Sponsors reviewed the parameters of the toll structure and BPM results for the adopted toll structure in comparison to results evaluated in the Final EA with respect to factors that affect economic conditions, such as movement of workforce, non-work-related trips, and effects on the taxi and FHV industry. As presented earlier, the toll rates and other parameters fall within the range evaluated in the Final EA. In addition, BPM results for the adopted toll structure for factors affecting economic conditions also fall within the range evaluated in the Final EA. Consequently, the conclusions of the Final EA remain valid. The Project Sponsors will implement the enhancement commitments described in the Final EA related to small businesses, and reduced overnight toll rates for trucks and all other vehicles.

Table 6.7 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
6 – Economic Conditions	Benefits	Regional economic benefits	28-county study area	Narrative	Economic benefit through congestion relief in terms of travel-time savings and travel-time reliability improvements, which would increase productivity and utility, as well as safety improvements and reduced vehicle operating costs associated with reductions in congestion.							No	**No mitigation needed.** Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects
	Economic Effects of Toll Costs	Cost of new toll for workers and businesses in the CBD that rely on vehicles	Manhattan CBD	Narrative	No adverse effects to any particular industry or occupational category in the Manhattan CBD. Given the high level of transit access in the CBD and high percentage of transit share, the toll would affect only a small percentage of the overall workforce. This would not adversely affect operations of businesses in the Manhattan CBD or the viability of any business types, including the taxi/FHV industry.							No	**No mitigation needed.** No adverse effects **Enhancements** The Project Sponsors commit to establishing a Small Business Working Group (SBWG) that will meet 6 months prior and 6 months after Project implementation, and annually thereafter, to solicit ongoing input on whether and how businesses are being affected. As part of mitigation for other topics, TBTA will ensure the overnight toll for trucks and other vehicles is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m. in the final CBD toll structure; this will also benefit some workers and businesses.	Same as Final EA	No	**No mitigation needed.** No adverse effects The Project Sponsors will implement the Enhancements described in the Final EA.
	Price of Goods	Cost of new toll would not result in changes in the cost of most consumer goods	Manhattan CBD	Narrative	Not anticipated to result in meaningful change in cost for most consumer goods. Any cost increase associated with the new toll in the CBD Tolling Alternative that would be passed along to receiving businesses would be distributed among several customers per toll charge (since trucks make multiple deliveries) especially for businesses, including small businesses and micro-businesses, receiving smaller deliveries. This would minimize the cost to any individual business. Some commodity sectors (construction materials, electronics, beverages) are more prone to increases due to less competition within delivery market.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects
	Taxi and FHV Industry	Depending on the tolling scenario, the toll could reduce taxi and FHV revenues due to a reduction in taxi/FHV VMT with passengers within the CBD. While this could adversely affect individual drivers (see "Environmental Justice"), the industry would remain viable overall.	28-county study area	Net change in daily taxi/FHV VMT regionwide	-126,993 (-2.9%)	-14,028 (-0.3%)	-73,413 (-1.7%)	-217,477 (-5.0%)	-116,065 (-2.7%)	-4,888 (-1.0%)	-137,815 (-3.2%)	No	**No mitigation needed.** No adverse effects (see "Environmental Justice" for mitigation related to effects on taxi and FHV drivers).	-30,963 (-0.7%)	No	**No mitigation needed.** No adverse effects
				Net change in daily taxi/FHV VMT in the CBD	-21,498 (-6.6%)	+15,020 (+4.6%)	-11,371 (-3.5%)	-54,476 (-16.8%)	-25,621 (-7.9%)	+4,962 (+1.5%)	-27,757 (-8.6%)			-904 (-0.3%)		
	Local Economic Effects	Changes in parking demand near the 60th Street CBD boundary	Area near 60th Street Manhattan CBD boundary	Narrative	Changes in parking demand near the 60th Street Manhattan CBD boundary (including increases just north of 60th Street and decreases just to the south) could jeopardize the viability of one or more parking facilities in the area south of 60th Street but would not create a climate of disinvestment that could lead to adverse effects on neighborhood character.							No	**No mitigation needed.** No adverse effects	Same as Final EA	No	**No mitigation needed.** No adverse effects

Other Analyses: Parks and Recreational Resources (EA Chapter 7), Historic and Cultural Resources (EA Chapter 8), Visual Resources (EA Chapter 9)

Chapters 7, 8, and 9 of the Final EA explored the effects on three analysis areas—parks and recreational resources, historic and cultural resources, and visual resources, respectively—from the installation of the tolling infrastructure and tolling system equipment that would be used for the CBD Tolling Program. Those chapters of the Final EA concluded the following:

- **Parks and recreational resources:** The CBD Tolling Alternative would not result in adverse effects on parks and recreational resources. Except for Central Park, the CBD Tolling Alternative would not place tolling infrastructure or tolling system equipment within mapped parkland. The CBD Tolling Alternative would have a *de minimis* impact on Central Park (see also the discussion of the Final Section 4(f) Evaluation in section 19 of this reevaluation).
- **Historic and cultural resources:** The Project would not result in any direct or indirect effects on historic properties that would alter the characteristics of a historic property that qualify it for inclusion in the National Register of Historic Places, and the Project would have No Adverse Effect on historic and cultural resources.
- **Visual resources:** The visual changes introduced by the CBD Tolling Alternative would be minimal in the context of the urban landscape and would not result in adverse effects on visual quality as perceived by viewers. Therefore, the CBD Tolling Alternative would have a neutral effect on viewer groups.

The adopted toll structure would use the same tolling system equipment and infrastructure described and evaluated in the Final EA. Construction for the Project began in July 2023. Construction of tolling infrastructure and tolling system equipment is largely complete. Power and communications are nearing completion and testing is under way. With the same infrastructure and equipment and construction activities as evaluated in the Final EA, the conclusions of the Final EA for these analysis areas remain valid and no further analysis is needed. **Tables 7.1, 8.1, and 9.1** present information from the Final EA Table ES-5 summarizing the conclusions related to these topics, now modified to include the adopted toll structure.

CONCLUSION

The Final EA considered the effects from installation of tolling infrastructure and tolling system equipment related to parks and recreational resources, historic and cultural resources and visual resources. The adopted toll structure would have the same construction activities and the same permanent tolling infrastructure and tolling system equipment described and evaluated in the Final EA. Consequently, for these areas, the conclusions of the Final EA remain valid, and no additional mitigation measures are needed. The Project Sponsors will implement the mitigation commitments described in the Final EA.

Table 7.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
7 – Parks and Recreational Resources		New tolling infrastructure, tolling system equipment, and signage in the southern portion of Central Park	Manhattan CBD	Narrative	The Project would replace four existing streetlight poles at three detection locations in Central Park near 59th Street and on two adjacent sidewalks outside the park's wall. These poles would be in the same locations as existing poles and would not reduce the amount of park space or affect the features and activities of the park. The Project would also place tolling infrastructure beneath the structure of the High Line, outside the park area atop the High Line structure. Following consideration of public input received during the public comment period, FHWA concluded the CBD Tolling Alternative would not affect the activities, features, and attributes that qualify the High Line for protection under Section 4(f), and the CBD Tolling Alternative would have a *de minimis* impact on Central Park.							No	**No mitigation needed.** Refer to **Chapter 7, "Parks and Recreational Resources,"** for a listing of measures to avoid adverse effects to parks.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	**No mitigation needed.** The Project Sponsors will implement measures described in the Final EA.

Table 8.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
8 – Historic and Cultural Resources		New tolling infrastructure and tolling system equipment on or near historic properties	45 historic properties within the Project's Area of Potential Effects (APE)	Narrative	Based on a review of the Project in accordance with Section 106 of the National Historic Preservation Act, FHWA has determined that the Project would have No Adverse Effect on historic properties and the State Historic Preservation Office has concurred.							No	**No mitigation needed.** Refer to **Chapter 8, "Historic and Cultural Resources,"** for a listing of measures to avoid adverse effects to historic properties.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	**No mitigation needed.** The Project Sponsors will implement the measures described in the Final EA.

Table 9.1 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
9 – Visual Resources		Changes in visual environment resulting from new tolling infrastructure and tolling system equipment	Area of visual effect	Narrative	Infrastructure and equipment would be similar in form to streetlight poles, sign poles, or similar structures already in use throughout New York City. Cameras included in the array of tolling system equipment would use infrared illumination at night to allow images of license plates to be collected without any need for visible light. The Project would have a neutral effect on viewer groups and no adverse effect on visual resources							No	**No mitigation needed.** o adverse effects	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	**No mitigation needed.** No adverse effects.

10 Air Quality

Chapter 10 of the Final EA presented the assessment of the CBD Tolling Alternative's effects on air quality, air pollution, and greenhouse gas (GHG) emissions. The Final EA evaluated regional criteria pollutants, mobile source air toxic (MSAT) and GHG emissions, as well as potential effects at local intersections and highway segments. This section compares the air quality effects of the adopted toll structure to those predicted in the Final EA. Additional information is provided in **Appendix 10**.

METHODOLOGY

Final EA Methodology

Regional Analysis

1. Mesoscale analyses of criteria air pollutants, MSATs, and GHGs were conducted for a 12-county study area (see Final EA page 10-11). It included the 10-county area under the purview of the New York Metropolitan Transportation Council (NYMTC), which is the Metropolitan Planning Organization (MPO) for New York City, as well as the two counties in New Jersey with the greatest potential changes in VMT due to the Project (greatest increase and decrease). No Connecticut counties were analyzed because they were predicted to see decreases in VMT. The 12-county study area included the following:
    - New York City – Bronx, Kings (Brooklyn), New York (Manhattan), Queens, Richmond (Staten Island)
    - Long Island – Nassau, Suffolk
    - New York North of New York City – Putnam, Rockland, Westchester
    - New Jersey – Bergen, Hudson.
2. The version of the U.S. Environmental Protection Agency (USEPA) emissions model current at the time the regional analysis for the EA was begun, MOVES2014b, was used to estimate the mobile source emission factors for the mesoscale, MSAT, and GHG analyses.
3. Final EA Tolling Scenario A was analyzed, because it had the smallest reduction of VMT compared to the No Action Alternative and would therefore have the lowest beneficial effect on regional air quality.
4. For the No Action Alternative and Tolling Scenario A, MOVES was run using post-processed VMT[2], speeds, and vehicle mix, as well as the latest site-specific input data from the New York State Department of Environmental Conservation (NYSDEC) and the North Jersey Transportation Planning Authority (NJTPA), which is the MPO for the New Jersey counties in the study area.

2 The NYMTC Post Processor software was used for the 10-county NYMTC area. Information on post-processing adjustments can be found in NYMTC's Final Adopted *2023 Conformity Determination*, pg. 23, at: https://www.nymtc.org/en-us/Required-Planning-Products/Transportation-Conformity/Transportation-Conformity-Determination-Documents-adopted.

Microscale Analysis

1. Identified the intersections for analysis from the traffic analysis presented in Final EA Subchapter 4B, "Highways and Local Intersections." This included 102 intersections in a total of 15 different study areas.
2. Conducted screening analysis for pollutants of concern on a localized (microscale) level: CO, $PM_{2.5}$, and PM_{10}. The screening was conducted using the criteria from NYSDOT's *The Environmental Manual* (TEM), Chapter 1.1 and USEPA guidance (see the Final EA, Chapter 10, Sections 10.1.7.3 and 10.1.7.4) (see Final EA Sections 10.1.7.2 and 10.1.7.3).
3. All 102 intersections passed the screening analysis, and no detailed air quality analysis (modeling) was necessary.

Highway Link Analysis

1. Identified highway link locations and tolling scenario for analysis, based on the following:
   - Location with highest total Annual Average Daily Traffic (AADT) in any tolling scenario
   - Location of community concern, in worst-case scenario
   - Location with highest truck increase in any tolling scenario.
2. Conducted modeling of particulate matter (PM) using the regional model current at the time of the highway link analysis, USEPA's MOVES3 and AERMOD models.

Reevaluation Methodology

Regional Analysis

1. The analysis was conducted for the same 12-county study area as in the Final EA.
2. USEPA's current emission model, MOVES3.1, was used to estimate the mobile source emission factors for the mesoscale, MSAT, and GHG analyses in the reevaluation.
3. For the No Action Alternative and the adopted toll structure, MOVES3.1 was run using VMT (direct output from the BPM for the Project's 2023 analysis year), speeds, vehicle mix, as well as the latest site-specific input data from NYSDEC and NJTPA.

Microscale Analysis

1. Using the same information on incremental traffic volumes from the adopted toll structure at the 102 intersections as was used for the traffic analysis reevaluation, conducted screening analysis using the same methodology as the Final EA
2. As in the Final EA, all 102 intersections passed the screening analysis, and no detailed air quality analysis (modeling) was necessary.

Highway Link Analysis

1. Determined if locations for the adopted toll structure remain the same as the locations evaluated in the Final EA, based on the same factors:

- Highest total AADT (based on BPM results for adopted toll structure)
- Community concern
- Highest truck increase (based on BPM results for adopted toll structure).

2. For the locations evaluated in the Final EA, reviewed whether the applicable criteria (i.e., AADT or truck increments) with the adopted toll structure are higher than those analyzed in the Final EA.
3. For any locations identified in Step 1 that are different than those studied in the Final EA, or any Final EA locations where the increase in traffic was greater than that analyzed in the EA, conducted modeling of PM using USEPA's MOVES3.1 and AERMOD models.

The modeling approach for the reevaluation and models used for the Final EA are summarized in **Table 10.1** below.

Table 10.1 - Summary of Models Used for Final EA and Reevaluation Methodology

TOPIC	LOCATION IN FINAL EA, CHAPTER 10, "AIR QUALITY"	MODEL(S) USED IN FINAL EA	MODELING APPROACH FOR REEVALUATION
Regional Analysis	Methodology – Section 10.1.7.1, page10-10 Environmental Consequences – Section 10.3.2.1, page 10-21	▪ **MOVES2014b** (current version at time of analysis – no longer being updated or supported for use) ▪ VMT from NYMTC's post-processor (in coordination with NYMTC and the ICG, this step was taken to show that the Project would be consistent with NYMTC's conformity analysis because at the time of analysis the Project was not yet on the Transportation Improvement Plan (TIP))	▪ **MOVES3.1** (latest update to MOVES3 - https://www.epa.gov/moves/moves3-update-log) ▪ VMT direct from BPM (used Final EA network, VMT post-processing not required because the Project was added to the TIP and included in NYMTC conformity determination ▪ in 2022)
Microscale Analysis	Methodology – 10.1.7.2, page 10-14 Environmental Consequences – Section 10.3.2.2, page 10-42	▪ Screening only; no modeling required	▪ Screening only; no modeling required
Highway Link Analysis	Methodology – 10.1.7.5, page 10-16 Environmental Consequences – Section 10.3.2.3, page 10-46	▪ **MOVES3** (current version at time of analysis) ▪ **AERMOD version 21112** (current version at time of analysis – no longer being updated or supported for use) ▪ VMT direct from BPM	▪ **MOVES3.1** (latest update to MOVES3 - https://www.epa.gov/moves/moves3-update-log) ▪ **AERMOD** version 23132 (current version) ▪ VMT direct from BPM (Final EA Network)

ANALYSIS AND FINDINGS

Regional (Mesoscale) Analysis

In the Final EA, the regional analysis concluded that the CBD Tolling Alternative would benefit regional air quality by reducing criteria pollutants, MSATs, and GHG overall in the 12-county study area.

For the reevaluation, the regional analysis also concluded that the adopted toll structure would benefit regional air quality by reducing criteria pollutants, MSATs, and GHG overall in the 12-county study area. **Tables 10.2 through 10.4** present the results of the mesoscale air quality analysis for the adopted toll structure in comparison to the results for Tolling Scenario A from the Final EA. Additional information is provided in **Appendix 10**. Based on these analyses, the conclusions in the Final EA for both 2023 and 2045 remain valid.

Furthermore, the Project continues to be included in NYMTC's regional emissions analysis and the most recent conformity determination, which was approved by FHWA and the Federal Transit Administration on January 5, 2024.

Table 10.2 - Final EA Table 10-7. Mesoscale Emission Burdens, CBD Tolling Alternative (Tolling Scenario A, tons/year) – With the Adopted Toll Structure (Analysis Year 2023)

POLLUTANT	FINAL EA			ADOPTED TOLL STRUCTURE		
	No Action Alternative	CBD Tolling Alternative (Tolling Scenario A)	% Difference	No Action Alternative	Adopted Toll Structure	% Difference
Daily Vehicle-Miles Traveled (miles/day) – BPM Output for 12-County Study Area	146,956,932	146,556,877	-0.3%	146,956,932	146,387,802	-0.4%
Daily Vehicle-Miles Traveled (miles/day) – Post Processed for 12-County Study Area	182,736,632	182,143,856	-0.3%	N/A	N/A	N/A
Volatile Organic Compounds (VOC)	17,698	17,667	-0.2%	6,567	6,541	-0.4%
Nitrogen Oxides (NO_x)	23,956	23,864	-0.4%	12,437	12,378	-0.5%
Carbon Monoxide (CO)	227,726	227,074	-0.3%	93,881	93,220	-0.7%
Particulate Matter (PM_{10})	5,884	5,828	-1.0%	2,878	2,849	-1.0%
Particulate Matter ($PM_{2.5}$)	1,452	1,441	-0.7%	604	599	-0.8%
Carbon Dioxide Equivalents (CO_2e)	32,445,206	32,236,481	-0.6%	17,461,889	17,360,966	-0.6%

Note: For the Final EA, post processed vehicle-miles traveled were used for analysis. They were generated off of the NYMTC Best Practice Model (BPM) outputs using the NYMTC Post Processor software. They are higher than the NYMTC BPM outputs due to a series of seasonal adjustments. NYMTC's Transportation Conformity Determination includes details on these adjustments: https://www.nymtc.org/Required-Planning-Products/Transportation-Conformity/Transportation-Conformity-Determination-Documents-adopted. Post processing is conducted in accordance with NYMTC's procedures to generate maximum potential worst-case conditions for TIP conformity analyses only when a Project has not yet been included in the conformity analysis of an adopted TIP – as was the case at the time the mesoscale analysis was begun for the Final EA. Post processing was not conducted for the adopted toll structure in the Reevaluation, as the Project is now part of the TIP for which NYMTC's 2022 conformity analysis was completed.

Table 10.3 - Final EA Table 10-8. Mesoscale Emission Burden Percentage Changes by County, CBD Tolling Alternative (Tolling Scenario A, Analysis Year 2023) – With the Adopted Toll Structure Below

POLLUTANT	FINAL EA TOLLING SCENARIO A – PERCENT CHANGE FROM NO ACTION ALTERNATIVE (FINAL EA NETWORK RUN POST-PROCESSED, ANALYZED IN MOVES2014B)												
	New York												
	CBD Only	Entire County	Queens	Bronx	Kings	Richmond	Nassau	Suffolk	Westchester	Rockland	Putnam	Hudson	Bergen
Daily Vehicle-Miles Traveled	-11.56%	-5.88%	-0.36%	0.15%	-0.74%	1.73%	0.03%	-0.03%	-0.22%	-0.17%	0.28%	-2.24%	0.88%
Volatile Organic Compounds (VOC)	-4.96%	-3.29%	-0.32%	0.03%	-0.32%	0.44%	0.05%	0.02%	0.21%	-0.05%	-0.03%	-0.66%	0.20%
Nitrogen Oxides (NO_x)	-9.54%	-5.96%	-0.56%	0.09%	-0.68%	1.26%	0.09%	0.00%	-0.25%	-0.12%	0.37%	-1.85%	0.63%
Carbon Monoxide (CO)	-7.58%	-4.58%	-0.37%	0.02%	-0.51%	0.89%	0.03%	-0.03%	-0.13%	-0.05%	0.00%	-1.02%	0.49%
Particulate Matter (PM_{10})	-12.16%	-9.75%	-1.23%	0.30%	-1.00%	2.12%	0.19%	0.11%	-0.32%	-0.36%	0.31%	-3.86%	0.74%
Particulate Matter ($PM_{2.5}$)	-11.37%	-8.52%	-0.99%	0.20%	-0.90%	1.80%	0.14%	0.06%	-0.23%	-0.25%	0.26%	-3.00%	0.69%
Carbon Dioxide Equivalents (CO_2e)	-11.48%	-7.92%	-0.84%	0.15%	-0.88%	1.76%	0.15%	0.03%	-0.40%	-0.23%	0.17%	-3.03%	0.80%

Source: WSP, 2022.

POLLUTANT	ADOPTED TOLL STRUCTURE – PERCENT CHANGE FROM NO ACTION ALTERNATIVE (FINAL EA NETWORK RUN, ANALYZED IN MOVES3.1)												
	New York												
	CBD Only	Entire County	Queens	Bronx	Kings	Richmond	Nassau	Suffolk	Westchester	Rockland	Putnam	Hudson	Bergen
Daily Vehicle-Miles Traveled	-8.90%	-5.47%	-0.68%	0.15%	-0.61%	2.35%	-0.10%	0.00%	-0.59%	-0.35%	-0.06%	-2.23%	1.11%
Volatile Organic Compounds (VOC)	-5.44%	-4.27%	-0.36%	-1.11%	-0.45%	0.94%	-0.05%	0.01%	-0.25%	-0.06%	0.02%	-2.08%	0.45%
Nitrogen Oxides (NO_x)	-7.41%	-4.85%	0.67%	1.48%	0.03%	2.47%	-0.09%	0.02%	-0.31%	-0.21%	-0.05%	-4.96%	0.92%
Carbon Monoxide (CO)	-10.83%	-6.91%	-0.92%	-0.42%	-0.99%	2.24%	-0.10%	0.01%	-0.60%	-0.32%	0.00%	-3.59%	1.05%
Particulate Matter (PM_{10})	-11.02%	-7.26%	-0.65%	0.94%	-1.08%	2.70%	-0.12%	0.07%	-0.58%	-0.22%	0.16%	-6.34%	0.94%
Particulate Matter ($PM_{2.5}$)	-10.49%	-6.59%	-0.31%	0.95%	-0.73%	2.51%	-0.11%	0.06%	-0.46%	-0.23%	0.06%	-5.39%	1.00%
Carbon Dioxide Equivalents (CO_2e)	-11.00%	-6.46%	-0.56%	0.34%	-0.75%	2.30%	-0.10%	0.01%	-0.54%	-0.31%	-0.02%	-3.91%	1.06%

Source: WSP, 2024.

Yellow highlights indicate an increase compared to the No Action Alternative.

Draft, Privileged and Confidential – for discussion purposes only; data still being assessed.

Table 10.4 - Final EA Table 10-11. Mobile Source Air Toxics Emission Burden Percentage Changes by County, CBD Tolling Alternative (Tolling Scenario A, Analysis Year 2023) – With the Adopted Toll Structure Below

POLLUTANT	FINAL EA TOLLING SCENARIO A – PERCENT CHANGE FROM NO ACTION ALTERNATIVE (FINAL EA NETWORK RUN POST-PROCESSED, ANALYZED IN MOVES2014B)												
	New York												
	CBD Only	Entire County	Queens	Bronx	Kings	Richmond	Nassau	Suffolk	Westchester	Rockland	Putnam	Hudson	Bergen
Daily Vehicle-Miles Traveled	-11.56%	-5.88%	-0.36%	0.15%	-0.74%	1.73%	0.03%	-0.03%	-0.22%	-0.17%	0.28%	-2.24%	0.88%
1,3-Butadiene	-11.82%	-9.11%	-1.12%	0.17%	-0.99%	1.96%	0.22%	0.07%	-0.25%	-0.26%	0.30%	-3.93%	0.81%
Acetaldehyde	-11.78%	-9.09%	-1.13%	0.16%	-0.99%	1.95%	0.26%	0.08%	-0.25%	-0.27%	0.30%	-3.96%	0.79%
Acrolein	-11.79%	-9.25%	-1.17%	0.15%	-1.01%	1.98%	0.29%	0.10%	-0.26%	-0.28%	0.29%	-4.05%	0.77%
Benzene	-10.91%	-7.37%	-0.74%	0.05%	-0.82%	1.56%	0.13%	0.01%	-0.19%	-0.17%	0.27%	-2.48%	0.70%
Diesel PM	-11.79%	-8.64%	-0.94%	0.20%	-0.94%	1.99%	0.23%	0.10%	-0.28%	0.00%	0.28%	-3.44%	0.74%
Ethylbenzene	-8.58%	-6.14%	-0.65%	0.07%	-0.63%	1.01%	0.12%	0.03%	-0.11%	-0.12%	0.15%	-1.57%	0.40%
Formaldehyde	-11.78%	-9.18%	-1.15%	0.16%	-1.00%	1.96%	0.29%	0.09%	-0.26%	-0.28%	0.29%	-4.02%	0.77%
Naphthalene	-11.76%	-9.06%	-1.13%	0.14%	-0.99%	1.95%	0.27%	0.08%	-0.25%	-0.27%	0.29%	-3.96%	0.78%
Polycyclic Organic Matter	-11.59%	-8.46%	-0.99%	0.09%	-0.96%	1.84%	0.20%	0.04%	-0.24%	-0.25%	0.30%	-3.62%	0.82%

Source: WSP, 2022.

POLLUTANT	ADOPTED TOLL STRUCTURE – PERCENT CHANGE FROM NO ACTION ALTERNATIVE (FINAL EA NETWORK RUN, ANALYZED IN MOVES3.1)												
	New York												
	CBD Only	Entire County	Queens	Bronx	Kings	Richmond	Nassau	Suffolk	Westchester	Rockland	Putnam	Hudson	Bergen
Daily Vehicle-Miles Traveled	-8.90%	-5.47%	-0.68%	0.15%	-0.61%	2.35%	-0.10%	0.00%	-0.59%	-0.35%	-0.06%	-2.23%	1.11%
1,3-Butadiene	-11.26%	-6.99%	-0.80%	0.33%	-0.93%	2.35%	-0.11%	0.03%	-0.59%	-0.28%	-8.33%	-5.84%	1.01%
Acetaldehyde	-6.76%	-4.80%	0.24%	0.80%	-0.33%	2.39%	-0.10%	0.03%	-0.45%	-0.25%	-6.72%	-8.19%	0.91%
Acrolein	-7.96%	-5.10%	0.24%	1.01%	-0.27%	2.09%	-0.09%	0.02%	-0.39%	-0.25%	-5.90%	-7.10%	0.90%
Benzene	-10.29%	-6.48%	-0.74%	-0.37%	-0.87%	1.72%	-0.09%	0.02%	-0.48%	-0.29%	-8.50%	-4.67%	1.04%
Diesel PM	-8.60%	-4.84%	1.09%	1.22%	0.45%	2.31%	-0.06%	0.06%	-0.23%	-0.17%	-4.43%	-4.89%	1.04%
Ethylbenzene	-6.34%	-4.80%	-0.48%	-0.02%	-0.56%	1.09%	-0.06%	0.02%	-0.29%	-0.27%	-8.62%	-5.71%	0.99%
Formaldehyde	-7.09%	-4.83%	0.12%	0.79%	-0.37%	2.20%	-0.10%	0.02%	-0.45%	-0.27%	-6.48%	-8.50%	0.93%
Naphthalene	-9.13%	-5.61%	-0.26%	0.77%	-0.56%	2.06%	-0.10%	0.02%	-0.48%	-0.28%	-6.86%	-6.99%	0.96%
Polycyclic Organic Matter	-9.43%	-5.68%	-0.24%	0.80%	-0.51%	2.07%	-0.10%	0.02%	-0.46%	-0.27%	-6.69%	-6.40%	0.99%

Source: WSP, 2024.

Yellow highlights indicate an increase compared to the No Action Alternative.

Microscale Analysis

For both the Final EA and the reevaluation, all 102 local intersections passed the screening analysis. As such, no further analysis was needed. **Table 10.5** illustrates the results of the microscale screening analysis for the Final EA and the adopted toll structure. Additional information is provided in **Appendix 10**.

Table 10.5 - Final EA Table 10-13. CO and $PM_{2.5}$/PM_{10} Microscale Screening Results 2023, CBD Tolling Alternative (Tolling Scenario C and Tolling Scenario D) – With the Adopted Toll Structure Added

LOCATION	INTERSECTION	FINAL EA		ADOPTED TOLL STRUCTURE	
		CO SCREENING	$PM_{2.5}$/PM_{10} SCREENING	CO SCREENING	$PM_{2.5}$/PM_{10} SCREENING
Downtown Brooklyn	Flatbush Ave & Tillary St	Passed	Passed	Passed	Passed
	Adams St & Tillary St	Passed	Passed	Passed	Passed
	Old Fulton St & Vine St	Passed	Passed	Passed	Passed
Lincoln Tunnel (Manhattan)	Ninth Ave & West 33rd St	Passed	Passed	Passed	Passed
	Dyer Ave & West 34th St	Passed	Passed	Passed	Passed
	Twelfth Ave & West 34th St	Passed	Passed	Passed	Passed
	Eleventh Ave & West 42nd St	Passed	Passed	Passed	Passed
	Dyer Ave & West 36th St	Passed	Passed	Passed	Passed
	Tenth Ave & West 33rd St	Passed	Passed	Passed	Passed
	Eleventh Ave & West 34th St	Passed	Passed	Passed	Passed
	Tenth Ave & West 41st St	Passed	Passed	Passed	Passed
	Twelfth Ave & West 42nd St	Passed	Passed	Passed	Passed
Long Island City (Queens)	Pulaski Bridge/11th St & Jackson Ave	Passed	Passed	Passed	Passed
	11th St & 48th Ave	Passed	Passed	Passed	Passed
	50th Ave at Vernon Blvd	Passed	Passed	Passed	Passed
	Green St & McGuiness Blvd	Passed	Passed	Passed	Passed
	McGuinness Blvd & Freeman St	Passed	Passed	Passed	Passed
	21st St & 49th Ave	Passed	Passed	Passed	Passed
	11th St & Borden Ave	Passed	Passed	Passed	Passed
	Van Dam St & Queens-Midtown Tunnel Expwy	Passed	Passed	Passed	Passed
	Van Dam St & Borden Ave	Passed	Passed	Passed	Passed
	Jackson Ave/Northern Blvd & Queens Plaza	Passed	Passed	Passed	Passed
	Thomson Ave & Dutch Kills St	Passed	Passed	Passed	Passed
	Thomson Ave & Dutch Kills St	Passed	Passed	Passed	Passed
	21st St & Queens Plaza N	Passed	Passed	Passed	Passed
Lower Manhattan (Manhattan)	Trinity Place & Edgar St	Passed	Passed	Passed	Passed
	Trinity Place & Rector St	Passed	Passed	Passed	Passed
	Hugh L. Carey Tunnel Entrance/Exit & West St	Passed	Passed	Passed	Passed
	Hugh L. Carey Tunnel Exit & West St & West Thames St	Passed	Passed	Passed	Passed
	Chambers St & Centre St	Passed	Passed	Passed	Passed
	Canal & Hudson Sts/Holl& Tunnel On-Ramp	Passed	Passed	Passed	Passed
	Canal St & Holl& Tunnel On-Ramp	Passed	Passed	Passed	Passed
	Canal St S & West St	Passed	Passed	Passed	Passed

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LOCATION	INTERSECTION	FINAL EA		ADOPTED TOLL STRUCTURE	
		CO SCREENING	$PM_{2.5}/PM_{10}$ SCREENING	CO SCREENING	$PM_{2.5}/PM_{10}$ SCREENING
	West St & Albany St	Passed	Passed	Passed	Passed
	West St & Vesey St	Passed	Passed	Passed	Passed
	West St & Chambers St	Passed	Passed	Passed	Passed
	Canal St/Manhattan Bridge & Bowery	Passed	Passed	Passed	Passed
	Manhattan Bridge & Bowery	Passed	Passed	Passed	Passed
	Sixth Ave & Watts St	Passed	Passed	Passed	Passed
	Canal St & Sixth Ave/Laight St	Passed	Passed	Passed	Passed
New Jersey	14th St/Holl& Tunnel (E-W) & Marin Blvd (N-S)	Passed	Passed	Passed	Passed
	14th St (E-W) & Jersey Ave (N-S)	Passed	Passed	Passed	Passed
	12th St (E-W) & Jersey Ave (N-S)	Passed	Passed	Passed	Passed
	12th St/Holl& Tunnel (E-W) & Marin Blvd (N-S)	Passed	Passed	Passed	Passed
Queens-Midtown Tunnel (Manhattan)	East 37th St & Third Ave	Passed	Passed	Passed	Passed
	East 36th St & Second Ave	Passed	Passed	Passed	Passed
	East 34th St & Third Ave	Passed	Passed	Passed	Passed
	East 35th St & Third Ave	Passed	Passed	Passed	Passed
	East 34th St & Second Ave	Passed	Passed	Passed	Passed
	East 35th St & Second Ave	Passed	Passed	Passed	Passed
Red Hook (Brooklyn)	Hamilton Ave, Clinton St & West 9th St	Passed	Passed	Passed	Passed
	Hamilton Ave (northbound) & West 9th St	Passed	Passed	Passed	Passed
Robert F. Kennedy Bridge (Manhattan, the Bronx, Queens)	East 126th St & Second Ave	Passed	Passed	Passed	Passed
	East 125th St & Second Ave	Passed	Passed	Passed	Passed
	East 134th St & St. Ann's Ave	Passed	Passed	Passed	Passed
	St. Ann's Ave & Bruckner Blvd	Passed	Passed	Passed	Passed
	31st St & Astoria Blvd	Passed	Passed	Passed	Passed
	Hoyt Ave North & 31st St	Passed	Passed	Passed	Passed
	Hoyt Ave South & 31st St	Passed	Passed	Passed	Passed
Upper East Side (Manhattan)	East 60th St & Ed Koch Queensboro Bridge Exit	Passed	Passed	Passed	Passed
	East 60th St & Third Ave	Passed	Passed	Passed	Passed
	East 60th St & York Ave	Passed	Passed	Passed	Passed
	East 59th St & Second Ave	Passed	Passed	Passed	Passed
	East 60th St & Second Ave	Passed	Passed	Passed	Passed
	East 60th St & First Ave	Passed	Passed	Passed	Passed
	East 60th St & Lexington Ave	Passed	Passed	Passed	Passed
	East 60th St & Park Ave (northbound)	Passed	Passed	Passed	Passed
	East 60th St & Park Ave (south- & westbound)	Passed	Passed	Passed	Passed
	East 60th St & Madison Ave	Passed	Passed	Passed	Passed
	East 62nd St & Ed Koch Queensboro Bridge Exit	Passed	Passed	Passed	Passed
	East 60th St & Fifth Ave	Passed	Passed	Passed	Passed
	East 63rd St & York Ave	Passed	Passed	Passed	Passed
	East 53rd St & Franklin D. Roosevelt Dr	Passed	Passed	Passed	Passed
	East 61st St & Fifth Ave	Passed	Passed	Passed	Passed
	East 65th St & Fifth Ave	Passed	Passed	Passed	Passed
	East 66th St & Fifth Ave	Passed	Passed	Passed	Passed
	East 79th St & Fifth Ave	Passed	Passed	Passed	Passed

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LOCATION	INTERSECTION	FINAL EA		ADOPTED TOLL STRUCTURE	
		CO SCREENING	$PM_{2.5}/PM_{10}$ SCREENING	CO SCREENING	$PM_{2.5}/PM_{10}$ SCREENING
	East 71st St & York Ave	Passed	Passed	Passed	Passed
Upper West Side (Manhattan)	West 72nd St & West End Ave	Passed	Passed	Passed	Passed
	West 61st St & West End Ave	Passed	Passed	Passed	Passed
	West 79th St & Riverside Drive	Passed	Passed	Passed	Passed
	West 56th St & Twelfth Ave	Passed	Passed	Passed	Passed
	West 56th St & West Side Hwy	Passed	Passed	Passed	Passed
	West 55th St & West Side Hwy	Passed	Passed	Passed	Passed
	West 55th St & Twelfth Ave	Passed	Passed	Passed	Passed
	West 55th St & West Side Hwy Arterial	Passed	Passed	Passed	Passed
	West 60th St & Broadway	Passed	Passed	Passed	Passed
	West 60th St & Columbus Ave	Passed	Passed	Passed	Passed
	West 60th St & Amsterdam Ave	Passed	Passed	Passed	Passed
	West 60th St & West End Ave	Passed	Passed	Passed	Passed
	West 61st St & Amsterdam Ave	Passed	Passed	Passed	Passed
	West 61st St & Columbus Ave	Passed	Passed	Passed	Passed
	West 61st St & Broadway	Passed	Passed	Passed	Passed
	West 61st St & Columbus Ave	Passed	Passed	Passed	Passed
	West 81st St & Central Park West	Passed	Passed	Passed	Passed
	West 66th St & Central Park West	Passed	Passed	Passed	Passed
	West 65th St & Central Park West	Passed	Passed	Passed	Passed
West Side Hwy / Rte 9A (Manhattan)	West 24th St & Twelfth Ave	Passed	Passed	Passed	Passed
Little Dominican Republic (Manhattan)	West 179th St & Broadway	Passed	Passed	Passed	Passed
Lower East Side (Manhattan)	Park Row/Chatham Sq, Worth/Oliver St & Mott St	Passed	Passed	Passed	Passed
	Chatham Square & East Broadway	Passed	Passed	Passed	Passed
	Chatham Square/Bowery & Division St	Passed	Passed	Passed	Passed

Highway Link Analysis

For the Final EA, highway link analyses for particulate matter (PM) effects were conducted at three sites:

- I-95 west of the George Washington Bridge, Tolling Scenario C – Highest total AADT in any scenario
- Cross Bronx Expressway at Macombs Road, Tolling Scenario B – Community concern
- Robert F. Kennedy (Triborough) Bridge Queens approach, Tolling Scenario E – Highest truck increase in any scenario

At all sites, predicted PM concentrations with the Project would be below the National Ambient Air Quality Standards (NAAQS).

In addition, a screening analysis was conducted for potential carbon monoxide (CO) effects at a location of community concern (FDR Drive at 10th Street); this location passed the screening and, therefore, no further analysis was required.

For the reevaluation, all highway links were evaluated to determine if those locations analyzed in the Final EA still represent worst-case conditions with the adopted toll structure. The findings are as follows (see also **Appendix 10**):

- **Highest total AADT:** I-95 west of the George Washington Bridge still represents the location with the highest AADT. As shown in **Table 10.6**, With the adopted toll structure, the AADT at this location would be higher than that analyzed in the Final EA (although total and incremental truck volumes would be lower than in the Final EA). Therefore, additional modeling was conducted using MOVES3.1. The modeling showed that the predicted PM concentrations with the adopted toll structure would still be below the applicable NAAQS (see **Table 10.7**). Therefore, the conclusions of the Final EA remain valid.
- **Community concern:** At the Cross Bronx Expressway at Macombs Road location, the AADT and truck volume changes with the adopted toll structure would be below the maximum increment analyzed in the Final EA, where the results were below NAAQS, and no adverse effect was found. Therefore, no additional modeling was necessary, and the conclusions of the Final EA remain valid.
- **Highest truck increase:** The Robert F. Kennedy (RFK) Bridge Queens approach would still be the location with the largest truck increase. The truck volume changes at the RFK Bridge for the adopted toll structure are all below the maximum increment analyzed in the Final EA, where the results were below NAAQS, and no adverse effect was found. Therefore, no additional modeling was necessary, and the conclusions of the Final EA remain valid.

In addition, as in the Final EA, a screening analysis was conducted for the adopted toll structure for potential CO impacts at the location of community concern (FDR Drive at 10th Street); this location passed the screening and, therefore, no further analysis is required.

Table 10.6 - Changes in AADT and Trucks (2023), Final EA and Adopted Toll Structure

LINK #	COUNTY	ROADWAY	NO ACTION		FINAL EA SCENARIO C		ADOPTED TOLL STRUCTURE	
			AADT	Trucks	AADT	Trucks	AADT	Trucks
268133 & 268131	Bergen	I-95 West of the George Washington Bridge	241,327	34,133	249,307	34,862	251,668	34,632
Change from No Action					7,980	729	10,341	499
Percent Change from No Action					3.3%	2.1%	4.3%	1.5%

Table 10.7 - Changes in Particulate Matter Concentrations (2023), Final EA and Adopted Toll Structure – I-95 West of the George Washington Bridge

FINAL EA TABLE*	POLLUTANT	FINAL EA		ADOPTED TOLL STRUCTURE		NAAQS ($\mu g/m^3$)
		No Action Alternative – MOVES3 ($\mu g/m^3$)	Final EA Tolling Scenario C ($\mu g/m^3$)	No Action Alternative – MOVES3.1 ($\mu g/m^3$)	Adopted Toll Structure ($\mu g/m^3$)	
Table 1	PM10	105	107	88	89	150
Table 2	$PM_{2.5}$ 24-hour	29.5	29.7	27.8	28.0	35.0
Table 3	$PM_{2.5}$ Annual	11.1	11.2	10.8	10.9	12.0

* See Final EA Appendix 10D, page 10-52.

Note: No Action pollutant concentrations are lower than in the Final EA because MOVES 3.1 (latest version) was used with the latest input files (vehicle age distribution, vehicle mix) and meteorological data in AERMOD for the reevaluation. Incremental changes from the No Action under the adopted toll structure are the same or less than those for Final EA Tolling Scenario C.

Table 10.8 presents information from the Final EA Table ES-5 summarizing the conclusions related to air quality, now modified to include the adopted toll structure.

CONCLUSION

The Final EA evaluated the CBD Tolling Alternative's effects on regional air pollutants and at local intersections and highway segments using screening-level analyses and detailed air quality modeling, as appropriate. Using BPM results for the adopted toll structure, the Project Sponsors applied the same methodology for the reevaluation of air quality. The analysis demonstrates that there are no potential adverse effects related to air quality and the conclusions of the Final EA remain valid. No additional mitigation is needed and the Project Sponsors remain committed to the enhancement measures described in the Final EA and FONSI.

Table 10.8 - Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
				A	B	C	D	E	F	G					
10 – Air Quality	Increases or decreases in emissions related to truck traffic diversions	Cross Bronx Expressway at Macombs Road, Bronx, NY	Increase or decrease in Annual Average Daily Traffic (AADT)	3,901	3,996	2,056	1,766	3,757	2,188	3,255	No	**No mitigation needed.** No adverse effects **Enhancements** **1.** Refer to the overall enhancement on monitoring at the end of this table. **2.** TBTA will work with NYC DOHMH to expand the existing network of sensors to monitor priority locations and supplement a smaller number of real-time $PM_{2.5}$ monitors to provide insight into time-of-day patterns to determine whether the changes in air pollution can be attributed to changes in traffic occurring after implementation of the Project. The Project Sponsors will select the additional monitoring locations in consideration of air quality analysis in the EA and input from environmental justice stakeholders. NYS Department of Environmental Conservation (NYSDEC) and other agencies conducting monitoring will also be consulted prior to finalizing the monitoring approach. The Project Sponsors will monitor air quality prior to implementation (setting a baseline), and two years following implementation. Following the initial two-year post-implementation analysis period, and separate from ongoing air quality monitoring and reporting, the Project Sponsors will assess the magnitude and variability of changes in air quality to determine whether more monitoring sites are necessary. Data collected throughout the monitoring program will be made available publicly as data becomes available and analysis is completed. Data from the real-time monitors will be available online continuously from the start of pre-implementation monitoring. **3.** MTA is currently transitioning its fleet to zero-emission buses, which will reduce air pollutants and improve air quality near bus depots and along bus routes. MTA is committed to prioritizing traditionally underserved communities and those impacted by poor air quality and climate change and has developed an approach that actively incorporates these priorities in the deployment phasing process of the transition. Based on feedback received during the outreach conducted for the Project and concerns raised by members of environmental justice communities, TBTA coordinated with MTA NYCT, which is committed to prioritizing the Kingsbridge Depot and Gun Hill Depot, both located in and serving primarily environmental justice communities in	3,917	No	**No mitigation needed.** The Project Sponsors are maintaining their commitment to implement the enhancement measures identified in the Final EA and FONSI.
			Increase or decrease in daily number of trucks	509	704	170	510	378	536	50			433		
			Potential adverse air quality effects from truck diversions	No	No	No	No	No	No	No			No		
		I-95, Bergen County, NJ	Increase or decrease in AADT	9,843	11,459	7,980	5,003	7,078	5,842	12,506	No		10,341	No	
			Increase or decrease in daily number of trucks	801	955	729	631	696	637	-236			499		
			Potential adverse air quality effects from truck diversions	No	No	No	No	No	No	No			No		
		RFK Bridge, NY	Increase or decrease in AADT	18,742	19,440	19,860	19,932	20,465	20,391	21,006	No		20,273	No	
			Increase or decrease in daily number of trucks	2,257	2,423	2,820	3,479	4,116	3,045	432			2,433		

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EA CHAPTER	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
				A	B	C	D	E	F	G					
			Potential adverse air quality effects from truck diversions	No	No	No	No	No	No	No		Upper Manhattan and the Bronx, when electric buses are received in MTA's next major procurement of battery electric buses, which began in late 2022. This independent effort by MTA NYCT is anticipated to provide air quality benefits to the environmental justice communities in the Bronx.	No		

OVERALL PROJECT ENHANCEMENT. The Project Sponsors commit to ongoing monitoring and reporting of potential effects of the Project, including for example, traffic entering the CBD, vehicle-miles traveled in the CBD; transit ridership from providers across the region; bus speeds within the CBD; air quality and emissions trends; parking; and Project revenue. Data will be collected in advance and after implementation of the Project. A formal report on the effects of the Project will be issued one year after implementation and then every two years. In addition, a reporting website will make data, analysis, and visualizations available in open data format to the greatest extent practicable. Updates will be provided on at least a bi-annual basis as data becomes available and analysis is completed. This data will also be used to support an adaptive management approach to monitoring the efficacy of mitigation, and adjustments as warranted.

11 Energy

Chapter 11 of the Final EA evaluated the effects of the CBD Tolling Alternative on energy use during operation and construction. This section evaluates the effects of the adopted toll structure on energy demand.

METHODOLOGY

Final EA Methodology

The Final EA evaluated the potential effects of the Project on the following elements:

- **Roadway energy:** Analyzed using the same methodology, assumptions and model as the regional air quality analysis documented in Chapter 10 of the Final EA (Tolling Scenario A, for the 12-county study area, using the USEPA's then-current emissions model, MOVES2014b). The analysis evaluated Tolling Scenario A because that scenario was predicted to have the smallest reduction in VMT. Using that scenario presents the smallest regional energy benefit; other tolling scenarios would have a larger benefit.
- **Server and systems energy:** Energy required to power monitoring and tolling equipment, including network detection systems, and servers that process the data collected by the network detection systems.
- **Construction energy:** Calculated based on the construction cost, using the NYSDOT construction cost calculation procedures to quantify energy use.

Reevaluation Methodology

- **Roadway energy:** Consistent with the approach for the Final EA, the energy analysis for the reevaluation used the same methodology, assumptions, and model that were used for the reevaluation of air quality. The reevaluation of air quality for the adopted toll structure was of the 12-county study area, using USEPA's current emissions model (MOVES3.1). (See the section on air quality for further information about the models used for the reevaluation.)
- **Server, systems and construction energy:** There are no changes to the power requirements or construction costs of the Project with the adopted toll structure and therefore no further analysis needed.

ANALYSIS AND FINDINGS

Like Final EA Tolling Scenario A, the adopted toll structure would also result in a reduction in VMT in the 12-county study area and a reduction in energy use in the region as compared to the No Action Alternative (see **Table 11.1**). Based on this analysis, the conclusions in the Final EA for both 2023 and 2045 remain valid.

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Table 11.1. Percent Change in Energy Demand Vs. No Action Alternative (2023), Final EA and Adopted Toll Structure

FINAL EA ANALYSIS (TOLLING SCENARIO A)	ADOPTED TOLL STRUCTURE
-0.6%	-0.6%

Table 11.2 presents information from the Final EA Table ES-5 summarizing the conclusions related to regional energy use, now modified to include the adopted toll structure.

CONCLUSION

The reevaluation used BPM output related to VMT and vehicle speeds to calculate the effects of the adopted toll structure on energy use. It also used information on construction cost to calculate energy use related to construction activities for the Project. The analysis concluded that, consistent with the conclusions of the Final EA, the adopted toll structure would also result in a reduction in VMT in the 12-county study area and would also therefore reduce energy use as compared to the No Action Alternative. The adopted toll structure would not change the construction activities for the Project from those analyzed in the Final EA. Overall, the conclusions of the Final EA related to energy use remain valid.

Table 11.2. Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
11 – Energy		Reductions in regional energy consumption	12-county study area	Narrative	Reductions in regional VMT would reduce energy consumption							No	**No mitigation needed.** Beneficial effects	Same as Final EA	No	**No mitigation needed.** Beneficial effects

12 Noise

Chapter 12 of the Final EA presented an evaluation of the potential changes in traffic noise exposure that would result from projected changes in traffic volumes with the implementation of the CBD Tolling Alternative. This section evaluates the effects of the adopted toll structure on noise levels. Additional information is provided in **Appendix 12**.

METHODOLOGY

Final EA Methodology

The methodology used to determine potential noise effects is described starting on page 12-1 of the Final EA, Section 12.1.2, "Methodology." In summary, the Final EA analysis methodology included the following:

1. For consideration of traffic-related noise near bridge and tunnel crossings into the Manhattan CBD, used BPM results related to traffic volumes for the tolling scenario with the highest predicted traffic volumes, Tolling Scenario D, which was the tolling scenario analyzed in the Final EA's traffic assessment (Subchapter 4B).
2. For evaluation of traffic-related noise at local intersections, used the same study areas and traffic volumes analyzed for traffic in the Final EA (Subchapter 4B) for all 102 local traffic intersections within 15 study areas. As with the traffic analysis, this assessment considered Tolling Scenario D at all locations, except in Downtown Brooklyn, where Tolling Scenario C was evaluated.
3. Calculated incremental changes in noise levels for traffic volumes, using Passenger Car Equivalents (PCEs) (using PCEs, 1 auto = 1 PCE; 1 medium truck = 13 PCEs; 1 bus = 18 PCEs; 1 heavy truck = 47 PCEs) for each study area. As with the traffic analysis, the noise analysis used Tolling Scenario D at all locations except Downtown Brooklyn, for which it used Tolling Scenario C.
    - For bridge and tunnel crossings, calculated 24-hour change in A-weighted noise levels (dB(A))[3].
    - For local intersections, calculated peak-period and late-night changes in A-weighted noise levels (dB(A)).
4. For locations where predicted incremental noise levels were greater than 3.0 dB(A), which is the minimum level of potential perceptibility for most humans (see Final EA Chapter 12, Section 12.1.2.1), further analysis would be conducted using FHWA's Traffic Noise Model (TNM) to determine if the increases would be adverse. (No locations had predicted increases above 3.0 dB(A), so no further analysis was necessary.)

[3] As described in the Final EA, Chapter 12, sound is typically measured in units of decibels (dB). The human hearing range is more sensitive to midrange frequencies compared to either low or very high frequencies. This characteristic of the human ear is accounted for by adjusting or weighting the spectrum of the measured sound level for the sensitivity of the human hearing range, referred to as the A-weighted scale, and is denoted by the dB(A) notation.

Reevaluation Methodology

1. For the same study areas as the Final EA, used the traffic volumes developed for the reevaluation of traffic conditions.
2. Where traffic volumes were higher for the adopted toll structure than evaluated in the Final EA, calculated incremental changes in noise levels for traffic volumes, using same approach as in Final EA.
3. As in the Final EA, for any locations with predicted incremental noise increases greater than 3.0 dB(A), further analysis would be conducted to determine if the increases would be adverse. (As described below, no locations had predicted levels above this level so no further analysis was necessary.)

ANALYSIS AND FINDINGS

The reevaluation concluded that, similar to the Final EA, the adopted toll structure would not result in perceptible noise level increases at bridge and tunnel crossings or local intersections. All projected noise level increases would be below the 3 dB(A) perceptibility level.

- **Bridge and Tunnel Crossings:** The predicted noise level increases with the adopted toll structure are all 0.5 dB(A) or less. Where increases are predicted compared to the No Action Alternative, in most cases they are lower than, or equal to, those studied in the Final EA. The location where the highest noise level increase would occur would shift with the adopted toll structure. With the tolling scenarios evaluated in the Final EA, which were the tolling scenarios predicted to result in the highest traffic volumes in each study area, the highest noise-level increase would occur at the Queens-Midtown Tunnel, with an increase of 2.9 dB(A). With the adopted toll structure, the highest noise-level increase would occur at the Robert F. Kennedy (RFK) Bridge in Manhattan, with an increase of 0.5 dB(A). With both the adopted toll structure and the Final EA tolling scenarios, the maximum noise-level increases would remain below the 3 dB(A) level of perceptibility. **Table 12.1** presents the results of the noise analysis for bridge and tunnel crossings for the Final EA and the adopted toll structure. Additional information is provided in **Appendix 12**.

Table 12.1 - Modified Final EA Table 12-4. Projected Noise-Level Changes (in dB(A)) for CBD Tolling Alternative at Bridge and Tunnel Crossings - Worst-Case Tolling Scenarios D and C – with the Adopted Toll Structure Below

TIME	ED KOCH QUEENSBORO BRIDGE	QUEENS-MIDTOWN TUNNEL (SITE R1)	HUGH L. CAREY TUNNEL (SITE R2)	HOLLAND TUNNEL	LINCOLN TUNNEL	RFK BRIDGE – BRONX	RFK BRIDGE – MANHATTAN	RFK BRIDGE – QUEENS	WILLIAMSBURG BRIDGE	MANHATTAN BRIDGE	BROOKLYN BRIDGE	GEORGE WASHINGTON + HENRY HUDSON BRIDGES	HENRY HUDSON BRIDGE	VERRAZZANO-NARROWS BRIDGE	60TH STREET CROSSINGS	GEORGE WASHINGTON BRIDGE
12 AM	-1.9	**2.9**	1.8	-0.6	-0.3	0.0	0.5	0.0	-2.4	-1.7	-0.4	0.0	-0.1	0.2	-0.6	**0.1**
1 AM	-1.9	**2.9**	1.8	-0.7	-0.4	0.0	0.5	0.0	-2.4	-1.7	-0.3	0.0	-0.1	0.2	-0.6	**0.1**
2 AM	-1.9	**2.9**	**1.9**	-0.7	-0.2	0.0	0.5	0.0	-2.6	-1.7	-0.3	0.0	-0.1	**0.3**	-0.6	**0.1**
3 AM	-1.7	**2.9**	1.8	-0.6	-0.1	0.0	0.4	0.0	-2.9	-1.6	-0.4	0.0	-0.1	0.2	-0.6	**0.1**
4 AM	-1.6	**2.9**	1.8	-0.6	0.0	0.0	0.4	0.0	-3.2	-1.7	-0.4	0.0	-0.1	0.2	-0.6	**0.1**
5 AM	-1.5	2.7	1.8	-0.4	0.2	0.0	0.3	0.0	-3.3	-1.8	-0.5	0.0	-0.1	0.1	-0.6	**0.1**
6 AM	0.0	0.4	1.1	-0.3	-0.2	0.0	0.2	0.0	-0.3	-0.6	-0.2	0.0	0.0	0.0	-0.2	0.0
7 AM	0.0	0.1	0.6	-0.3	-0.2	0.0	0.2	0.0	-0.1	-0.6	-0.2	0.0	0.0	0.1	-0.2	0.0
8 AM	0.0	0.1	0.7	-0.3	-0.2	0.0	0.3	0.0	-0.1	-0.6	-0.1	0.0	0.0	0.1	-0.2	0.0
9 AM	0.0	0.1	1.0	-0.3	-0.2	0.0	0.3	0.0	-0.2	-0.6	-0.1	0.0	0.0	0.1	-0.2	0.0
10 AM	-0.4	0.4	1.1	-0.5	-0.4	0.0	0.3	0.0	-0.7	-1.8	-0.1	0.0	-0.1	0.2	-0.6	**0.1**
11 AM	-0.5	0.5	1.5	-0.5	-0.5	0.0	0.3	0.0	-1.0	-1.8	-0.2	0.0	-0.1	**0.3**	-0.6	**0.1**
12 PM	-0.8	0.7	1.7	-0.6	-0.5	0.0	0.3	0.0	-1.0	-1.7	-0.2	0.0	-0.1	**0.3**	-0.6	**0.1**
1 PM	-0.7	0.4	1.7	-0.6	-0.6	0.0	0.3	0.0	-0.9	-1.7	-0.3	0.0	-0.1	0.2	-0.6	**0.1**
2 PM	-0.7	0.3	1.1	-0.6	-0.6	0.0	0.4	0.0	-0.7	-1.6	-0.3	0.0	-0.1	0.2	-0.6	**0.1**
3 PM	-0.7	0.3	0.7	-0.5	-0.7	0.0	0.4	0.0	-0.5	-1.4	-0.3	0.0	-0.1	0.2	-0.6	**0.1**
4 PM	-0.9	0.7	0.7	-0.3	-0.6	0.0	0.3	0.0	-0.8	-0.4	-0.1	0.0	0.0	0.1	-0.2	0.0
5 PM	-1.0	0.6	0.7	-0.3	-0.6	0.0	0.3	0.0	-0.8	-0.5	-0.1	0.0	0.0	0.1	-0.2	0.0
6 PM	-0.7	0.6	0.8	-0.4	-0.6	0.0	0.3	0.0	-1.0	-0.5	-0.1	0.0	0.0	0.1	-0.2	0.0
7 PM	-0.8	0.8	1.1	-0.4	-0.6	0.0	0.3	0.0	-1.2	-0.5	-0.1	0.0	0.0	0.1	-0.2	0.0
8 PM	-1.5	1.2	1.4	-0.6	-0.3	0.0	**0.6**	0.0	-1.5	-1.7	-0.4	0.0	-0.1	0.2	-0.6	**0.1**
9 PM	-1.6	1.7	1.8	-0.6	-0.3	0.0	0.5	0.0	-2.0	-1.7	-0.4	0.0	-0.1	0.2	-0.6	**0.1**
10 PM	-1.5	2.2	1.8	-0.6	-0.3	0.0	0.5	0.0	-2.2	-1.7	-0.4	0.0	-0.1	0.2	-0.6	**0.1**
11 PM	-1.8	2.8	1.8	-0.7	-0.2	0.0	0.5	0.0	-2.6	-1.7	-0.4	0.0	-0.1	0.2	-0.6	**0.1**

Note: Values shown in **bold** indicate the greatest increase for the location.

Table 12.1 - Modified Final EA Table 12-4. Projected Noise-Level Changes (in dB(A)) for CBD Tolling Alternative at Bridge and Tunnel Crossings - Adopted Toll Structure

TIME	ED KOCH QUEENSBORO BRIDGE	QUEENS-MIDTOWN TUNNEL (SITE R1)	HUGH L. CAREY TUNNEL (SITE R2)	HOLLAND TUNNEL	LINCOLN TUNNEL	RFK BRIDGE – BRONX	RFK BRIDGE – MANHATTAN	RFK BRIDGE – QUEENS	WILLIAMSBURG BRIDGE	MANHATTAN BRIDGE	BROOKLYN BRIDGE	GEORGE WASHINGTON + HENRY HUDSON BRIDGES	HENRY HUDSON BRIDGE	VERRAZZANO-NARROWS BRIDGE	60TH STREET CROSSINGS	GEORGE WASHINGTON BRIDGE
12 AM	0.0	0.2	0.2	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.3	0.0	0.0	-0.6	**0.3**	0.0	0.3
1 AM	0.0	0.2	0.2	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.3	**0.1**	0.0	-0.6	**0.3**	0.0	0.3
2 AM	0.0	0.2	0.1	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.3	0.0	0.0	-0.6	**0.3**	0.0	**0.4**
3 AM	0.2	0.2	0.2	-0.7	-1.1	0.0	0.4	0.0	-0.9	-1.2	0.0	0.0	-0.7	**0.3**	0.0	**0.4**
4 AM	0.3	0.2	0.2	-0.7	-1.1	0.0	0.4	0.0	-0.9	-1.2	-0.1	0.0	-0.9	**0.3**	0.0	**0.4**
5 AM	**0.4**	**0.4**	0.4	-0.6	-1.2	0.0	0.3	0.0	-1.0	-1.3	-0.1	0.0	-1.1	**0.3**	0.0	0.4
6 AM	-1.9	0.2	0.4	-0.4	-0.4	0.0	0.2	0.0	-0.3	-0.8	-0.1	0.0	0.0	0.2	0.0	0.0
7 AM	-1.9	0.2	0.3	-0.5	-0.4	0.0	0.2	0.0	-0.3	-0.7	-0.1	0.0	0.0	0.2	0.0	0.0
8 AM	-1.9	0.2	0.3	-0.5	-0.4	0.0	0.2	0.0	-0.3	-0.7	-0.1	0.0	0.0	0.2	0.0	0.0
9 AM	-1.9	0.1	**0.5**	-0.4	-0.4	0.0	0.2	0.0	-0.3	-0.8	-0.1	0.0	0.0	0.2	0.0	0.0
10 AM	-0.5	-0.1	0.2	-0.7	-0.9	0.0	0.2	0.0	-0.7	-1.2	-0.2	0.0	-0.2	0.2	0.0	0.2
11 AM	-0.5	-0.1	0.2	-0.8	-0.9	0.0	0.2	0.0	-0.8	-1.2	-0.3	0.0	-0.2	0.2	0.0	0.2
12 PM	-0.6	-0.1	0.2	-0.8	-0.9	0.0	0.2	0.0	-0.8	-1.3	-0.2	0.0	-0.2	0.2	0.0	0.3
1 PM	-0.6	-0.1	0.2	-0.8	-0.9	0.0	0.2	0.0	-0.8	-1.3	-0.2	0.0	-0.2	0.2	0.0	0.3
2 PM	-0.6	-0.1	0.2	-0.8	-0.9	0.0	0.2	0.0	-0.8	-1.3	-0.2	0.0	-0.2	0.2	0.0	0.3
3 PM	-0.6	-0.2	0.2	-0.7	-0.9	0.0	0.3	0.0	-0.8	-1.3	-0.2	0.0	-0.2	0.2	0.0	0.3
4 PM	-0.7	-0.1	0.0	-0.4	-0.6	0.0	**0.5**	0.0	-0.5	-1.2	-0.4	0.0	0.0	0.1	0.0	0.1
5 PM	-0.6	-0.1	0.0	-0.4	-0.6	0.0	**0.5**	0.0	-0.5	-1.3	-0.4	0.0	0.0	0.1	0.0	0.1
6 PM	-0.9	0.0	0.0	-0.5	-0.6	0.0	**0.5**	0.0	-0.6	-1.3	-0.4	0.0	0.0	0.1	0.0	0.1
7 PM	-0.9	0.2	0.0	-0.5	-0.6	0.0	**0.5**	0.0	-0.6	-1.3	-0.4	0.0	0.0	0.1	0.0	0.1
8 PM	0.1	0.2	0.2	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.3	0.0	0.0	-0.7	**0.3**	0.0	0.3
9 PM	0.1	0.2	0.2	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.3	0.0	0.0	-0.7	**0.3**	0.0	0.3
10 PM	0.1	0.2	0.2	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.3	0.0	0.0	-0.6	**0.3**	0.0	0.3
11 PM	0.0	0.2	0.2	-0.7	-1.0	0.0	**0.5**	0.0	-0.9	-1.2	-0.1	0.0	-0.6	**0.3**	0.0	0.3

Notes: Values shown in **bold** indicate the greatest increase for the location. Yellow shading indicates an increase from the No Action that is greater than that from the Final EA Tolling Scenarios C and D.
See Final EA Table 12-4 on page 12-9 for values with the CBD Tolling Alternative, Tolling Scenarios C and D.

- **Local Streets:** The location where the highest noise-level increase would occur at traffic intersections would also shift with the adopted toll structure. In the Final EA, this would occur during the midday in Lower Manhattan adjacent to Trinity Place and Edgar Street, with a maximum increase of 2.5 dB(A). With the adopted toll structure, it would occur near the intersection of West 179th Street and Broadway during the AM and midday periods where a maximum increase of 2.8 dB(A) is projected (see **Table 12.2**). The results for all intersections evaluated are summarized in **Appendix 12**. Overall, with both the adopted toll structure and the Final EA tolling scenarios, the maximum noise-level increases would remain below the 3 dB(A) level of perceptibility.

Table 12.2 - Estimated Directional Weighted PCE Noise Level Changes for Adopted Toll Structure, Little Dominican Republic Study Area, West 179th Street at Broadway

APPROACH	MOVEMENT	LANE GROUP	MOVEMENT	AM		MIDDAY		PM	
				PCE	DW PCE	PCE	DW PCE	PCE	DW PCE
NB	NBL	L	Left	3.0	**2.7**	2.5	**2.8**	1.3	2.5
	NBT	T	Through	2.6		2.9		3.1	
SB	SBT	T	Through	3.0	**2.8**	1.9	1.6	1.6	0.9
	SBR	TR	R	2.2		1.1		-0.8	
WB	WBL	TR	Left	3.1	-0.1	1.9	-2.2	2.4	-2.8
	WBT		Through	-1.1		-3.3		-4.0	
	WBR		Right						

Table 12.3 presents information from the Final EA Table ES-5 summarizing the conclusions related to traffic-related noise on bridge and tunnel approaches and at local intersections, now modified to include the adopted toll structure.

CONCLUSION

For the reevaluation, the Project Sponsors used information related to traffic volumes from the BPM to evaluate the adopted toll structure's potential effects on noise levels near bridge and tunnel crossings into the Manhattan CBD and at local intersections where traffic volumes are predicted to increase. The reevaluation used the same methodology as the noise analysis in the Final EA. The analysis demonstrates that the conclusions of the Final EA related to noise remain valid. Projected noise level increases would remain below 3.0 dB(A), as described in the Final EA. Thus, the adopted toll structure would not result in potential adverse effects on ambient noise levels and no mitigation is needed.

Table 12.3 - Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO A	B	C	D	E	F	G	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
12 – Noise		Imperceptible increases or decreases in noise levels resulting from changes in traffic volumes	Bridge and tunnel crossings	Narrative	The maximum noise level increases (2.9 dB(A)), which were predicted adjacent to the Queens-Midtown Tunnel in Tolling Scenario D, would not be perceptible.							No	**No mitigation needed.** No adverse effects **Enhancement** Refer to the overall enhancement on monitoring at the end of this table.	The maximum predicted noise level increase (0.5 dB(A)) at RFK Bridge in Manhattan, would not be perceptible.	No	**No mitigation needed.** No adverse effects. The Project Sponsors are maintaining their commitment to mplement the enhancement measures identified in the Final EA and FONSI.
			Local streets	Narrative	Tolling Scenario C was used to assess noise level changes in Downtown Brooklyn, Tolling Scenario D was used at all other locations assessed. The maximum predicted noise level increases (2.5 dB(A)), which were at Trinity Place and Edgar Street, would not be perceptible. There was no predicted increase in noise levels in the Downtown Brooklyn locations.							No		The maximum predicted noise level increases (2.8 dB(A)), at W. 179th St / Broadway, would not be perceptible.	No	

OVERALL PROJECT ENHANCEMENT. The Project Sponsors commit to ongoing monitoring and reporting of potential effects of the Project, including for example, traffic entering the CBD, vehicle-miles traveled in the CBD; transit ridership from providers across the region; bus speeds within the CBD; air quality and emissions trends; parking; and Project revenue. Data will be collected in advance and after implementation of the Project. A formal report on the effects of the Project will be issued one year after implementation and then every two years. In addition, a reporting website will make data, analysis, and visualizations available in open data format to the greatest extent practicable. Updates will be provided on at least a bi-annual basis as data becomes available and analysis is completed. This data will also be used to support an adaptive management approach to monitoring the efficacy of mitigation, and adjustments as warranted.

Other Analyses: Natural Resources (EA Chapter 13), Hazardous Wastes (EA Chapter 14), Construction Effects (EA Chapter 15)

Chapters 13, 14, and 15 of the Final EA explored the effects on three analysis areas—natural resources, hazardous wastes, and construction effects, respectively—e from the installation of the tolling infrastructure and tolling system equipment that will be used for the CBD Tolling Program. The adopted toll structure will use the same tolling infrastructure and tolling system equipment described and evaluated in the Final EA. Construction for the Project began in July 2023. The construction of tolling infrastructure and tolling system equipment is now complete. Power and communications are nearing completion and testing is under way. With the same infrastructure and equipment and construction activities as evaluated in the Final EA, the Final EA remains valid for these analysis areas and no further analysis is needed.

Tables 13.1, 14.1, and 15.1 present information from the Final EA Table ES-5 summarizing the conclusions related to these topics, now modified to include the adopted toll structure.

CONCLUSION

The Final EA considered the effects from installation of tolling infrastructure and tolling system equipment related to natural resources, hazardous wastes, and construction effects. The adopted toll structure would have the same construction activities and the same permanent tolling infrastructure and tolling system equipment described and evaluated in the Final EA. Consequently, for these areas, the conclusions of the Final EA remain valid, and no additional construction commitments are needed. The Project Sponsors will implement the mitigation commitments described in the Final EA.

Table 13.1. Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
13 – Natural Resources		Construction activities to install tolling infrastructure near natural resources	Sites of tolling infrastructure and tolling system equipment	Narrative	No effects on surface waters, wetlands, or floodplains. Potential effects on stormwater and ecological resources will be managed through construction commitments. The Project is consistent with coastal zone policies.							No	Refer to **Chapter 13, "Natural Resources,"** for a listing of construction commitments to avoid, minimize, or mitigate potential negative effects.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	The Project Sponsors will implement the construction commitments described in the Final EA.

Table 14.1. Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
14 – Hazardous Waste		Potential for disturbance of existing contaminated or hazardous materials during construction	Sites of tolling infrastructure and tolling system equipment	Narrative	Soil disturbance during construction and the potential alteration, removal, or disturbance of existing roadway infrastructure and utilities that could contain asbestos-containing materials, lead-based paint, or other hazardous substances. Potential effects will be managed through construction commitments.							No	Refer to **Chapter 14, "Asbestos-Containing Materials, Lead-Based Paint, Hazardous Wastes, and Contaminated Materials,"** for a listing of construction commitments to avoid, minimize, or mitigate potential negative effects.	Same as Final EA. No change proposed to new tolling infrastructure, tolling system equipment, or signage.	No	The Project Sponsors will implement the construction commitments described in the Final EA.

Table 15.1. Modified Final EA Table ES-5. Summary of Benefits and Effects for the CBD Tolling Alternative with Comparison of Tolling Scenarios – with the Adopted Toll Structure Added

EA CHAPTER	TOPIC	SUMMARY OF EFFECTS	LOCATION	DATA SHOWN IN TABLE	FINAL EA TOLLING SCENARIO							POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS	ADOPTED TOLL STRUCTURE	POTENTIAL ADVERSE EFFECT	MITIGATION AND ENHANCEMENTS
					A	B	C	D	E	F	G					
15 – Construction Effects		Potential disruption related to construction for installation of tolling infrastructure	Sites of tolling infrastructure and tolling system equipment	Narrative	Temporary disruptions to traffic and pedestrian patterns, and noise from construction activities, with a duration of less than one year overall, and approximately two weeks at any given location. These effects will be managed through construction commitments.							No	Refer to **Chapter 15, "Construction Effects,"** for a listing of construction commitments to avoid, minimize, or mitigate potential negative effects.	Same as Final EA. No change proposed to construction for new tolling infrastructure, tolling system equipment, or signage.	No	The Project Sponsors will implement the construction commitments described in the Final EA.

16 Summary of Effects

Chapter 16 of the Final EA provides a summary of the direct, indirect, and cumulative effects of the CBD Tolling Alternative as discussed in the previous chapters of the Final EA. The reevaluation of the adopted toll structure presented in other sections of this document demonstrates that, with the adopted toll structure, the conclusions in the Final EA remain valid and there is no need for additional mitigation. Consequently, the summary of direct, indirect, and cumulative effects also remains valid.

Table 1.1 in **Section 1** of this reevaluation provides a summary of the effects of the adopted toll structure in comparison to the effects presented in the Final EA. The table is a re-creation of the table that was provided in the Final EA as Table ES-5 and Table 16-1, now modified to include the adopted toll structure.

17 Environmental Justice

Chapter 17 of the Final EA presented an evaluation of the CBD Tolling Alternative's potential for disproportionately high and adverse effects to environmental justice populations, including effects on local communities and effects related to regional mobility. This section presents a reevaluation of that topic for the adopted toll structure.

METHODOLOGY

Final EA Methodology

The methodology used to determine potential effects on environmental justice populations is described starting on page 17-2 of the Final EA, Section 17.3, "Methodology." As described in that section, the environmental justice analysis evaluated two types of effects of the CBD Tolling Program:

- **Local (Neighborhood) Effects:** The Final EA evaluated the effects on neighborhoods related to changes in traffic patterns and the resulting effects in terms of traffic congestion, air emissions, and noise; it then assessed whether any such effects would occur disproportionately to environmental justice populations. This included a supplemental analysis for the Final EA of increases or decreases in traffic and truck traffic as a result of traffic diversions in communities already highly burdened by pre-existing air pollution and chronic diseases. For the local (neighborhood) effects, the Final EA used a 10-county study area where localized effects (such as changes in traffic volumes, air emissions, or noise) would occur as a result of the Project.
- **Regional Effects:** The Final EA considered how implementation of the CBD Tolling Alternative would affect the regional population in terms of increased costs (tolls), changes in trip time, and changes in transit conditions, and whether any effects would occur disproportionately to environmental justice populations. For regional effects, the Final EA evaluated the 28-county regional study area, which is the main catchment area for trips to and from the Manhattan CBD and the area where changes in travel patterns and mobility would occur.

Reevaluation Methodology

The re-evaluation used the same methodology as the Final EA in considering the local (neighborhood) effects and regional effects of the adopted toll structure.

ANALYSIS AND FINDINGS: LOCAL (NEIGHBORHOOD) EFFECTS

The Final EA considered a range of issues that had the potential to result in local, neighborhood effects:

- Increased traffic congestion on highway segments
- Changes in traffic conditions at local intersections

- Traffic-related effects on noise
- Increases to transit ridership
- Changes in passenger flows at transit stations
- Changes in pedestrian circulation near transit hubs
- Potential for indirect displacement
- Potential effects on the costs of goods
- Traffic-related effects on air quality (including a supplemental analysis for the Final EA of Project effects of traffic and truck traffic on communities with associated high pre-existing air pollutant and health burdens)

The Final EA concluded that, with the implementation of mitigation, the CBD Tolling Alternative would not result in disproportionately high and adverse effects on environmental justice populations in those topic areas.

The reevaluation of each of the topic areas above shows that, with implementation of mitigation, the effects of the adopted toll structure fall within the range of effects evaluated in the Final EA and the conclusions of the Final EA remain valid.

ANALYSIS AND FINDINGS: REGIONAL

Low-Income Drivers

As documented in the Final EA, a total of 16,100 low-income workers drive to the Manhattan CBD for work, based on Census Transportation Planning Program (CTPP) data. The EA published in August 2022 concluded that the increased cost to drivers with the new CBD toll would disproportionately affect low-income drivers who currently drive to the Manhattan CBD and do not have reasonable alternative transportation modes available, because the cost of the toll would consume a larger percentage of their available income. To avoid that potential disproportionate adverse effect, in the Final EA, the Project Sponsors committed to a program of mitigation measures for low-income frequent drivers. With further analysis of the population affected (as documented in Appendix 17E, "Approach to Mitigating the Effect of CBD Tolls on Low-Income Frequent Drivers"), and the addition of mitigation measures committed to by the Project Sponsors (see **Table 17.1** below), the Final EA concluded there would not be a disproportionately high and adverse effect on low-income drivers.

As shown in **Table 17.1**, the adopted toll structure includes passenger toll rates within the range evaluated in the Final EA and enhances the mitigation commitments related to low-income drivers, giving a deeper discount than that committed to in the Final EA.[4] Therefore, the conclusions of the Final EA remain valid for low-income drivers.

4 In the Final EA, the Project Sponsors committed $47.5 million over 5 years for Low-Income Discount Plan for low-income frequent drivers; with the adopted toll structure, the Project Sponsors will commit $82 million over 5 years to the deeper discount.

Minority Drivers

The Final EA determined that for minority drivers who have no reasonable alternative mode for reaching the Manhattan CBD other than private vehicle, the cost of the new CBD toll would have the same effect as experienced by the general population and no disproportionately high and adverse effect would occur.

The Final EA also included a separate analysis of the Project's effect on taxi and FHV drivers, discussed below.

Table 17.1 - Mitigation Commitments for Low-Income Drivers in Final EA and Adopted Toll Structure

FINAL EA	ADOPTED TOLL STRUCTURE
Toll Rates Evaluated	
Auto toll rates evaluated: $9 - $23 peak; $7 - $17 off-peak; $5 - $12 overnight	Auto toll rates within the range of the Final EA: $15 peak; $3.75 overnight
Mitigation Commitments	
Tax credit for CBD tolls paid by residents of the Manhattan CBD whose New York adjusted gross income for the taxable year is less than $60,000.	Commitment remains, not specific to the adopted toll structure
Information related to the tax credit to be posted on the Project website, with a link to the appropriate location on the NYS DTF website.	Commitment remains, not specific to the adopted toll structure
Elimination of the $10 E-ZPass tag deposit fee for customers without credit card backup.	Commitment remains, not specific to the adopted toll structure
Enhanced promotion of existing E-ZPass payment and plan options, including the ability for drivers to pay per trip (rather than a pre-load balance), refill their accounts with cash at participating retail locations, and discount plans already in place.	Commitment remains, not specific to the adopted toll structure
Outreach and education on eligibility for existing discounted transit fare products and programs.	Commitment remains, not specific to the adopted toll structure
Establishment of an Environmental Justice Community Group that will meet on a quarterly basis, with the first meeting prior to Project implementation, to share updated data and analysis and listen to potential concerns.	Commitment remains, not specific to the adopted toll structure
An overnight toll rate that is reduced to at or below 50 percent of the peak toll from at least 12:00 a.m. to 4:00 a.m. in the final CBD tolling structure, which will benefit low-income drivers traveling during this time. In the Final EA, a total of $30 million was allocated over 5 years for this discounted overnight toll.	The adopted toll structure includes an overnight toll discounted further than the mitigation commitment: 9 PM – 5 AM weekdays, 9 PM – 9 AM weekends 25% of peak toll rate, overnight EZP rates as follows: Auto - $3.75 Small truck - $6.00 Large truck - $9.00 A total of $123 million will be allocated over 5 years for this discounted overnight toll.
For the first five years of the Project, the final tolling structure to include a discounted toll rate for low-income frequent drivers who have either a Federal adjusted gross income reported on their income tax return for the prior calendar year	Low-Income Discount Plan included as part of the adopted toll structure, but discounted further than the mitigation commitment: ▪ A 50 percent discount on the peak toll rate after the first 10 trips each month.

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in the amount of no more than $50,000 or proof of enrollment in a qualifying government-provided income-based program: ▪ A 25 percent discount on the full CBD E-ZPass toll rate for the applicable time of day after the first 10 trips in each calendar month (not including the overnight period, which will already be deeply discounted). ▪ Results in a discounted base auto toll rate of $7 - $17, depending on the tolling scenario. ▪ In the Final EA, a total $47.5 million was allocated for this discount over 5 years	▪ Results in a discounted base auto toll rate of $7.50. ▪ A total of $82 million will be allocated over 5 years for this increased discount.

Minority Taxi and FHV Drivers

The EA published in August 2022 identified potential adverse effects to taxi and/or FHV drivers in New City in tolling scenarios that charge their vehicles more than one passenger-vehicle toll per day.[5] The adverse effect would be related to the cost of the new CBD toll and the reduction of VMT for taxis and/or FHVs, which would result in a decrease in revenues that could lead to losses in employment. The Final EA assumed this adverse effect would occur predominantly to a minority population and therefore would be a disproportionately high and adverse effect without mitigation.

To avoid this potential disproportionate adverse effect, the Project Sponsors committed to a toll structure that would cap tolls for New York City taxis and FHVs at one passenger toll per day. With this mitigation, the Final EA concluded that no disproportionately high and adverse effect would occur to taxi and FHV drivers.

This reevaluation considers the effects of the adopted toll structure, in which the per-trip toll rate for taxis will be $1.25 and the rate for FHVs will be $2.50. Based on New York City Taxi and Limousine Commission 2023 information on the average number of trips per day for taxis and FHVs (12 trips for taxis and 6 for FHVs), these pre-trip rates are equivalent to the amount of the once-per-day toll for passenger vehicles, which will be $15.00. As described in **Table 17.2**, BPM model results for the adopted toll structure show that the reduction in VMT for taxis and FHVs in New York City (1.6 percent) will be within the range reported in the Final EA that would avoid an adverse effect on employment for drivers of taxis and FHVs, for tolling scenarios that limited tolls for taxis and FHVs to once per day.

Therefore, the adopted toll structure is consistent with the commitments in the Final EA related to taxi and FHV drivers. The conclusions of the Final EA remain valid.

[5] As noted in the Final EA on page 17-23, based on data from the New York City Taxi and Limousine Commission about the countries of origin of taxi and FHV drivers in New York City, for purposes of this analysis, New York City taxi and FHV drivers are identified as a minority population.

Table 17.2 - Modified Final EA Table 17-14. Change in Taxi/For-Hire Daily Vehicle-Miles Traveled in New York City vs. No Action Alternative - with the Adopted Toll Structure Added

GEOGRAPHIC AREA	FINAL EA TOLLING SCENARIOS								
	A	B	C	D	E	F	G	MODIFIED G	ADOPTED TOLL STRUCTURE
Taxi Toll Policy	All Entries	Once per Day	Exempt	All Entries	Exempt	Once per Day	All Entries	Once per Day	$1.25 per trip toll on trips to, within, or from the CBD (see note)
FHV Toll Policy	All Entries	Once per Day	Up to 3 Times Daily	All Entries	Up to 3 Times Daily	Once per Day	All Entries	Once per Day	$2.50 per trip toll on trips to, within, or from the CBD (see note)
Peak Toll Rate	$9	$10	$14	$19	$23	$23	$12	$12	$15
Bronx County	-8,392 (-3.1%)	-5,717 (-2.1%)	-6,426 (-2.4%)	-9,346 (-3.4%)	-3,991 (-1.5%)	-1,959 (-0.7%)	-7,831 (-2.9%)	-1,621 (-0.6%)	+16 (+0.0%)
Kings County (Brooklyn)	-33,855 (-9.1%)	-20,648 (-5.5%)	-10,247 (-2.7%)	-37,923 (-10.2%)	-27,854 (-7.5%)	-7,095 (-1.9%)	-39,183 (-10.5%)	-22,971 (-6.2%)	-5,857 (-1.6%)
New York County (Manhattan)	-77,843 (-10.9%)	-19,553 (-2.7%)	-51,989 (-7.3%)	-119,349 (-16.7%)	-73,223 (-10.2%)	-17,076 (-2.4%)	-87,944 (-12.3%)	-27,897 (-3.9%)	-25.105 (-4.9%)
Inside Manhattan CBD	-21,498 (-6.6%)	+15,020 (+4.6%)	-11,371 (-3.5%)	-54,476 (-16.8%)	-25,621 (-7.9%)	+4,962 (+1.5%)	-27,757 (-8.6%)	+10,203 (+3.1%)	-904 (-0.3%)
Outside Manhattan CBD	-56,345 (-14.4%)	-34,573 (-8.8%)	-40,618 (-10.4%)	-64,873 (-16.6%)	-47,602 (-12.2%)	-22,038 (-5.6%)	-60,187 (-15.4%)	-38,100 (-9.7%)	-34,201 (-8.7%)
Queens County	-3,873 (-0.4%)	+21,258 (+2.0%)	-10,804 (-1.0%)	-47,911 (-4.4%)	-19,342 (-1.8%)	+4,979 (+0.5%)	-7,812 (-0.7%)	+14,644 (+1.3%)	+5,311 (+0.5%)
Richmond County (Staten Island)	-4,884 (-8.6%)	-5,071 (-8.9%)	-4,940 (-8.7%)	-4,539 (-8.0%)	-6,002 (-10.5%)	-4,370 (-7.7%)	-4,917 (-8.6%)	-5,636 (-9.9%)	-4,405 (-7.7%)
NEW YORK CITY TOTAL	**-128,847 (-5.1%)**	**-29,731 (-1.2%)**	**-84,406 (-3.4%)**	**-219,068 (-8.8%)**	**-130,412 (-5.2%)**	**-25,521 (-1.0%)**	**-147,687 (-5.9%)**	**-43,481 (-1.7%)**	**-40,040 (-1.6%)**

Notes: Projections include VMT only during fares and do not include cruising without passenger(s), to reflect effects on demand and revenues.
Tolling Scenario Modified G was not included in Final EA Table 17-14, but was discussed in the narrative on the following page, Final EA page 17-54.
Yellow shading in the table highlights the Final EA tolling scenarios that limited tolls on taxis and FHVs to one passenger-vehicle toll per day.
The per-trip tolls in the adopted toll structure would be equivalent to the auto peak rate of $15 (based on 2023 TLC data for average trips per vehicle per day: for taxis the average number of trips with passengers to/from/within the CBD is 12, and for FHVs it is 6).

Draft, Privileged and Confidential – for discussion purposes only; data still being assessed.

ANALYSIS AND FINDINGS: LOCAL (NEIGHBORHOOD) EFFECTS RELATED TO TRAFFIC DIVERSIONS

For the Final EA, the Project Sponsors conducted additional analysis of the potential effects of traffic diversions resulting from the CBD Tolling Alternative on environmental justice communities that are already highly burdened by preexisting air pollution and chronic diseases and could see increased traffic. The analysis concluded that in some environmental justice census tracts that have high pre-existing pollutant burdens or chronic disease burdens where the CBD Tolling Alternative would increase traffic, these traffic increases have the potential to increase pollutant burdens and could contribute to chronic disease burdens and therefore could constitute a potential adverse effect on these particularly vulnerable environmental justice populations. The specific census tracts that would experience increased or decreased traffic changed slightly depending on the tolling scenario, but the affected communities remain largely the same. The effects would vary in magnitude depending on the additional volume of traffic and the extent of pre-existing pollutant and chronic disease burdens.

As in the Final EA, under the adopted toll structure the Project Sponsors committed to implement mitigation measures related to potential Project-related traffic diversions, related air pollutants, and associated health effects to benefit environmental justice communities that are already highly burdened by pre-existing air pollution and/or chronic diseases, relative to national percentiles. Mitigation measures will include regional measures, which will reduce truck diversions and reduce emissions. These regional measures will benefit communities with census tracts where individuals experience either pre-existing pollutant burdens or chronic-disease burdens at or above the 90th percentile among all communities in the United States, and where the Project could increase exposure to truck traffic due to traffic diversions as well as related pollutants and associated health effects.

Mitigation measures also include place-based measures to reduce emissions and improve air quality and/or health outcomes in areas with the greatest pre-existing burdens that would also be affected by Project-related diversions. As in the Final EA, under the adopted toll structure, the areas identified for place-based mitigation are the environmental justice census tracts where individuals experience at least one pre-existing pollutant burden and at least one pre-existing chronic disease burden at or above the 90th percentile, nationally, and where truck proximity could increase as a result of the Project. In addition, in the Final EA and under the adopted toll structure, results from analysis of non-truck traffic effects drew attention to traffic increases on the FDR Drive adjacent to the Lower Manhattan and Lower East Side communities. Additional modeling indicated that some of these increases could be mitigated by ensuring that vehicles traveling to Manhattan on the Brooklyn Bridge and then southbound on the FDR Drive by first going north, then exiting from the FDR Drive to East Houston Street, and then immediately turn left to head back south on the FDR Drive, would be tolled. In addition to the traffic monitoring plan for this area related to potential adverse effects on traffic, the adopted toll structure does not make this a free movement.

Additional detail on these mitigation measures and how they will be allocated can be found in the sections "**Regional and Place-Based Mitigation"** and "**Benefits and Allocation of Funding for Mitigation Measures**," below.

To fund these mitigation measures, the Project Sponsors committed to $155 million over 5 years in the Final EA. Under the adopted toll structure, the Project Sponsors will commit $248 million over 5 years by deepening the overnight toll discount and expanding the hours in which the discount will be offered.[6] **Table 17-13** shows the mitigation measures committed to by the Project Sponsors.

An adaptive management approach will be used, including monitoring the efficacy of mitigation, ongoing stakeholder consultation, and making adjustments as warranted. As committed to in the Final EA, TBTA has begun work with New York City's Department of Health and Mental Hygiene (NYC DOHMH) to expand New York City's existing air-quality monitoring network and is gathering readings from monitoring sites in Bergen and Hudson Counties, NJ through USEPA's Air Quality System. The monitoring effort will allow the Project Sponsors to determine whether any changes in air pollution can be attributed to changes in traffic occurring after implementation of the Project. As part of adaptive management, the toll schedule adopted by the TBTA Board allows for a percentage increase/decrease of up to 10 percent on CBD tolls and credits to respond to monitoring results if appropriate.

The analysis of effects related to traffic diversions on highly burdened environmental justice communities evaluated whether non-truck traffic proximity and truck traffic proximity could increase as a result of the Project in each census tract within the local study area. The analysis also evaluated whether truck traffic proximity could decrease. As defined in the Final EA Appendix 17D, Section 17D.4 (page 17D-14), highway non-truck and highway truck traffic proximity are measures of the amount of daily highway traffic near the population center within each census tract. Highway truck traffic proximity was a particular focus, because diesel emissions have a higher level of particulate matter, which is associated with adverse health outcomes, and because Project-related diversions would mainly occur on highways.[7]

Census tracts are, as defined by the U.S. Census Bureau, statistical subdivisions of a county or statistically equivalent entity. Communities contain multiple census tracts. As described in Final EA Appendix 17D, communities are defined as either municipalities (outside New York City) or neighborhoods (within New York City).8 Within the five New York City counties, these neighborhoods were identified using the United Hospital Fund (UHF) neighborhood definitions—a geography designed for health research.9 Environmental justice census tracts are census tracts where a greater proportion of the population is minority and/or low-income, as identified using the methodology described in Final EA Chapter 17, Section 17.5.1 (page 17-8).

Environmental justice census tracts where individuals experience at least one pre-existing pollutant burden <u>or</u> at least one pre-existing chronic disease burden at or above the 90th percentile, nationally, and where truck proximity could increase as a result of the Project, were identified as "90 or 90" census tracts. Environmental justice census tracts where individuals experience at least one pre-existing pollutant burden

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6 The $248 million committed is in addition to $5 million allocated for mitigation and enhancement measures related to monitoring across other topics, along with $82 million for the low-income toll discount to be implemented.
7 See Final EA, Appendix 17D, Section 17D-6.1.1 on page 17D-43 and 17D-6.1.3 on page 17D-44 for an explanation of how truck traffic proximity is calculated.
8 See Final EA Appendix 17D, Section 17D-6.1.4, p. 17D-50.
9 See Final EA, Appendix 17D, Section 17D-5.5.2, page 17D-29, Footnote 68 for more information on UHF neighborhoods.

and at least one pre-existing chronic disease burden at or above the 90th percentile, nationally, and where truck proximity could increase as a result of the Project were identified as "90 and 90" census tracts.[10]

As noted in Final EA, Appendix 17D, Section 17D-6.1.2, truck diversions would occur in every tolling scenario, but Tolling Scenario E had the maximum predicted truck diversions by volume for all census tracts in the 10-county environmental justice study area.[11] For this reason, the Project Sponsors presented potential truck-traffic proximity under Tolling Scenario E in the Final EA. The Project Sponsors also presented potential non-truck traffic proximity under Tolling Scenario E, as well as Tolling Scenario G; as noted in Section 17D-6.1.5 of Final EA Appendix 17D, modeled traffic results from the BPM indicated that Tolling Scenario G was the scenario with the largest potential increases in non-truck traffic across the environmental justice-designated census tracts in the 10-county environmental justice study area.[12] Any community with one or more environmental-justice-designated census tract meeting the "90 or 90" or "90 and 90" criteria was identified in the Final EA as a community that is already overburdened by pre-existing air pollution and chronic diseases. The Project Sponsors committed to a package of regional (for "90 or 90" communities) and place-based (for "90 and 90" communities) measures to mitigate potential adverse effects on environmental justice populations.

The same methodology described in Appendix 17D of the Final EA, "Technical Memorandum: Considerations for Environmental Justice Communities with Existing Pollution or Health Burdens," was used to evaluate the adopted toll structure for potential effects and identify the relevant "90 or 90" and "90 and 90" communities.

The overall findings for the adopted toll structure are described in the following paragraphs.

Truck Traffic

- **Potential Project Truck Diversion Effects:** The adopted toll structure would have more balanced potential diversion effects when comparing environmental-justice-designated and non-environmental-justice-designated census tracts (as illustrated in **Table 17.3**, which is Final EA Table 17D-11 with the adopted toll structure added). As shown in the table, for the 434 census tracts in the 10-county environmental justice study area that are within 300 meters of a highway, the Final EA predicted that 50 percent of the environmental justice-designated census tracts and 41 percent of the non-environmental justice-designated census tracts would have an increase in truck traffic proximity (a total of 205 tracts). **Table 17.3** also shows that 18 percent of environmental justice-designated census tracts and 19 percent of the non-environmental justice-designated census tracts would have a decrease in truck traffic proximity (a total of 79 tracts). For the adopted toll structure, the number of census tracts affected by an increase in truck traffic proximity would be slightly higher (209 tracts), but the results would be more evenly distributed between non-environmental justice-designated tracts (47 percent) and environmental justice-designated tracts (49 percent) and the number of affected environmental

10 Note that, by these definitions from the Final EA, "90 and 90" census tracts are also "90 or 90" census tracts; the former is a subset of the latter.
11 Final EA Appendix 17D, page. 17D-43.
12 Final EA Appendix 17D, page 17D-60.

justice-designated tracts would be lower than with the Final EA (151 rather than 154). The number of census tracts having a decrease in truck traffic proximity would be slightly lower (74 tracts); a greater number of environmental justice-designated census tracts would have a decrease (59 tracts rather than 56 tracts), and a smaller number of non-environmental justice-designated tracts would have a decrease (15 tracts rather than 23 tracts).

- **Intensity of Potential Truck-Traffic Increases**: The adopted toll structure would have lower intensities of truck-traffic proximity increases in "90 and 90" and "90 or 90" environmental justice-designated census tracts. This is illustrated in **Table 17.4**, which provides the minimum, average, and maximum increase in truck-traffic proximity for the "90 and 90" and "90 or 90" environmental justice-designated census tracts for Final EA Tolling Scenario E and the adopted toll structure. As described in Final EA Appendix 17D, "the change in truck traffic proximity for each environmental justice census tract is equal to the difference between truck AADT on freeways and interstates in the CBD Tolling Alternative and the No Build Alternative, as forecasted in the BPM, within 300 meters (approximately 1,000 feet) of the population-weighted census tract centroid, divided by distance in meters."[13] For both types of environmental justice-designated census tracts, the average increase and maximum increase in truck-traffic proximity that would occur with the adopted toll structure would be smaller than with Final EA Tolling Scenario E. **Figure 17.1** compares the intensity of potential truck traffic proximity decreases in Tolling Scenario E and the adopted toll structure among "90 or 90" environmental justice census tracts; **Figure 17.2** provides the same comparison but for the intensity of potential truck traffic proximity increases.

[13] See Final EA, Appendix 17D, Section 17D-6.1.1, page 17D-43. For further description of traffic proximity in US EPA's EJScreen, calculation methods, and how to interpret the measure, see Final EA, Appendix 17D, Section 17D-4, pp. 17D-14 and 17D-15, Section 17D-6.1.1, p. 17D-43, Sections 17D-6.1.3 and 17D-6.1.4, p. 17D-44.

Table 17.3 - Modified Final EA Table 17D-11. Summary of Project Effects on Truck Traffic Proximity (Tolling Scenario E) - With the Adopted Toll Structure Added

TYPE OF HIGHWAY TRUCK TRAFFIC PROXIMITY CHANGES RESULTING FROM THE PROJECT	NUMBER OF TRACTS WITH PRE-EXISTING AIR POLLUTANT OR CHRONIC DISEASE BURDENS WITHIN 300 METERS OF A HIGHWAY						% OF COMMUNITY TYPE AFFECTED			
	FINAL EA SCENARIO E			ADOPTED TOLL STRUCTURE			FINAL EA SCENARIO E		ADOPTED TOLL STRUCTURE	
	NON-ENVIRON-MENTAL JUSTICE TRACTS	ENVIRON-MENTAL JUSTICE TRACTS	TOTAL TRACTS	NON-ENVIRON-MENTAL JUSTICE TRACTS	ENVIRON-MENTAL JUSTICE TRACTS	TOTAL TRACTS	NON-ENVIRON-MENTAL JUSTICE TRACTS	ENVIRON-MENTAL JUSTICE TRACTS	NON-ENVIRON-MENTAL JUSTICE TRACTS	ENVIRON-MENTAL JUSTICE TRACTS
Tracts with Decrease in Truck Traffic Proximity	23	56	79	15	59	74	19%	18%	12%	19%
Tracts with No Change in Truck Traffic Proximity	49	101	150	50	101	151	40%	32%	41%	32%
Tracts with Increase in Truck Traffic Proximity	51	154	205	58	151	209	41%	50%	47%	49%
Total Tracts	123	311	434	123	311	434	100%	100%	100%	100%

Source: U.S. Census Bureau, ACS 2015-2019 5-Year Estimates; USEPA NATA 2017 and Agency Air Quality System 2018 via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

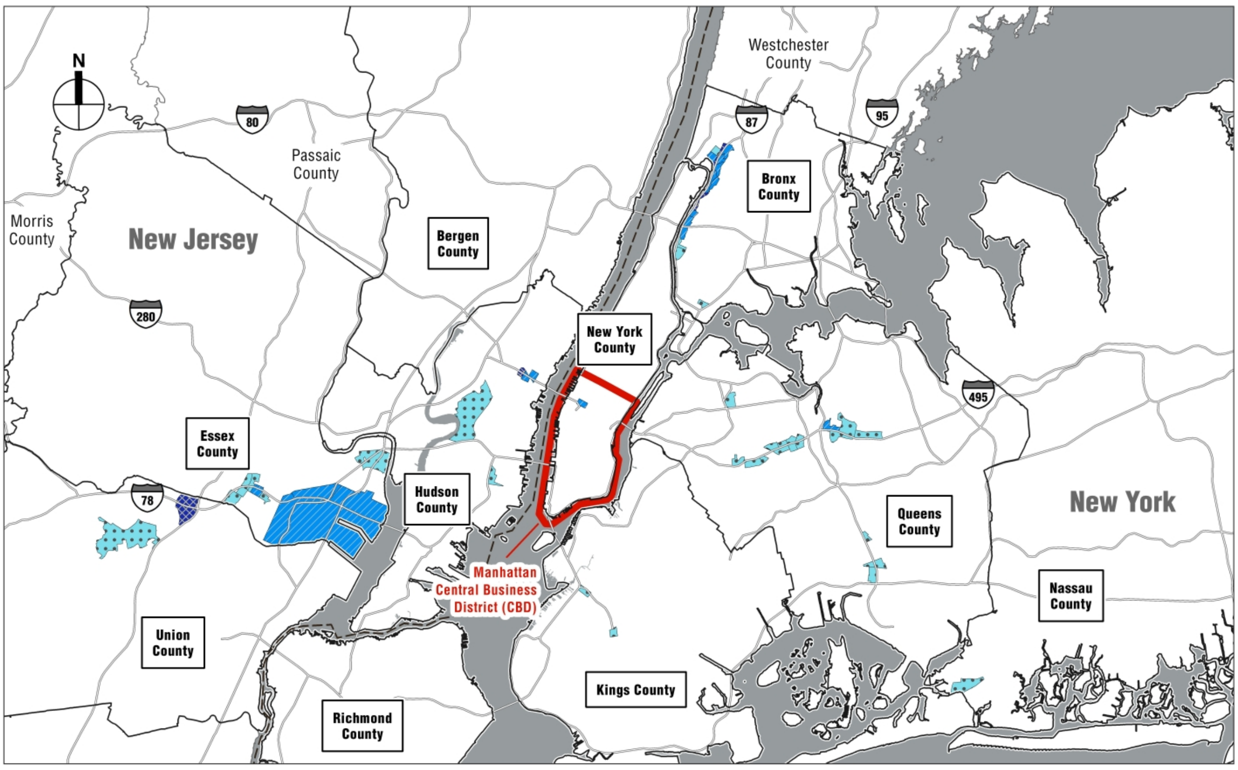
Table 17.4 - Range of Truck-Traffic Proximity Increases for Environmental Justice-Designated Overburdened Tracts, Final EA and Adopted Toll Structure

TOPIC	LOCATION	DATA SHOWN IN TABLE	TRUCK TRAFFIC PROXIMITY CHANGE (DAILY TRUCKS PER METER DISTANCE)	
			FINAL EA SCENARIO E	ADOPTED TOLL STRUCTURE
Increases in truck traffic proximity, as a result of traffic diversions, in communities already overburdened by preexisting air pollution and chronic diseases	90 AND 90 Environmental Justice-Designated Census Tracts (Place-Based)	Minimum Increase	0.21	0.13
		Average Increase	6.80	4.85
		Maximum Increase	122.71	72.13
	90 OR 90 Environmental Justice-Designated Census Tracts (Regional)	Minimum Increase	0.01	0.02
		Average Increase	7.50	4.99
		Maximum Increase	122.71	72.13

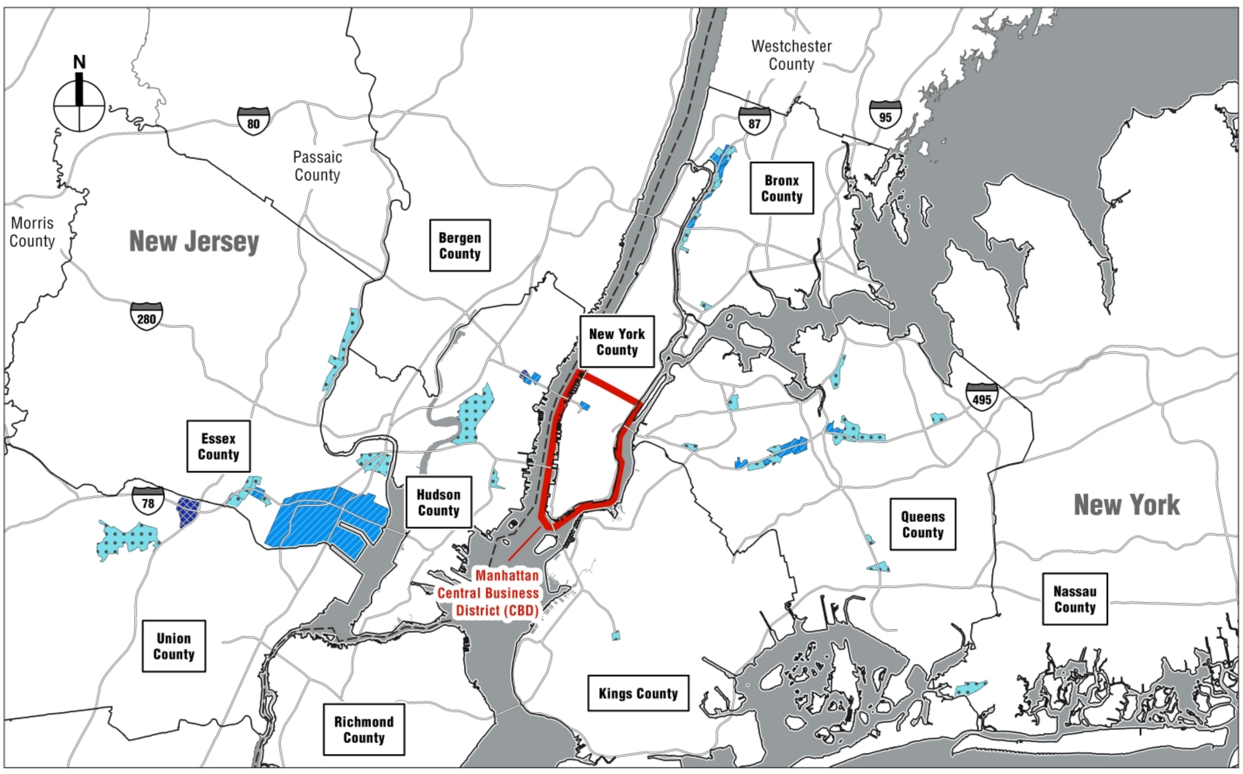
Source: U.S. Census Bureau, ACS 2015-2019 5-Year Estimates; USEPA NATA 2017 and Agency Air Quality System 2018 via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.

Figure 17.1. Environmental Justice Census Tracts with Either Pre-Existing Pollutant Indicators or Pre-Existing Chronic-Disease Indicators At or Above the 90th Percentile That Could Experience Truck Traffic Decreases

Tolling Scenario E



Adopted Toll Structure



Truck Traffic Proximity Change (Equivalent at 300 m, Approx. 1,000 ft Away)

0 5 MILES

Decrease

- 1 - 700 trucks
- 701 - 4,200
- 4,201+

Source: USEPA NATA and Agency Air Quality System via EJScreen 2021 data; CDC PLACES Estimates 2020 via EJI 2022 data; BPM, WSP 2021 and 2023.